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"Salvation of India lies in Cottages."

—*MAHATMA GANDHI*

PARTY AT THE COST OF PEOPLE

INAUGURATING the All India Swatantra Party Convention at Patna, Shri Rajgopalachari founder–leader of the Swatantra Party pertinently observed:

> "The people of India were crying like the neglected baby because the Government was more anxious to look after the interests of the Party than of the people. The Government must pay more attention to the people like dutiful mother instead of furthering the interests of the ruling party."

The party at the cost and sufferance of the people has characterised the Congress rule of the last 13 years. It is rather relieving in a way that the pinch of this partisan rule is being felt, though belated, by the leaders of the eminence of Shri Rajgopalachari, who have adorned the top-most positions of authority in the much maligned Congress rule only in the recent past. If elder–statesmen like him, who have helped to build–up the Congress brick by brick have risen in revolt to end the corrupt, inefficient and partisan rule of the Congress, the tyranny suffered by the political opponents of the ruling party and the mute Common–man can easily be imagined.

Various measures launched by the ruling party in the name of development viz: Controls, Issuing of Licences, Grow More Food Campaigns, the much advertised Planning, Community Projects and National Extension Services, Nationalisation of Industries, Banks and Life Insurance Business, Linguistic Division of Provinces, Organisation of Village Panchayats and Co-operatives and the latest controversial moves of State Trading in foodgrains, Ceiling on lands, Co-operative Farming and the appointment of various Commissions and Committees have all been primarily conceived and worked out to consolidate the Congrees and to benefit to Congress men.

If an impartial survey is made of the financial position of the Congress men before and after Independence, it will be found that a vast majority of them have accumulated bank balances, acquired landed properties, and immensely improved their financial position. Many of those holding places of authority in the Central and State administrations have become millionaires and multi–millionaires and are rolling in wealth and possessions. Every four-anna member joining the Congress in the post–Independance period makes it sure as to how he is to be personally benefited as a result of joining the ruling party.

Plight of Comman–man

As against this the Common–man and the middle class people are hard hit by ever soaring prices of essential commodities like food and clothing and a variety of taxations imposed and know not how to meet their family budget. Theirs is a desperate struggle for living with attenuated incomes and soaring prices of

the necessities of life and the restricted chances for free play of initiative and enterprise created by the Totalitarian policies of the Congress regime. Frustration and misery which is widespread among all classes of people, except probably those who belong to the ruling party, has made the Congress rule unpopular and tyrannical. The appearance of the 'Swatantra Party' to oppose and ultimately to replace the decaying Congress rule is no more than the natural reaction of the victimisation suffered by the people under the partisan rule of the Congress.

While moving the policy statement of the 'Swatantra Party' at Patna convention, Shri K. M. Munshi, Vice-president of the party gave eloquent expression of the sufferings and victimisation of the Common-man when he is reported to have stated :—

"The Common-man has been the first victim of the policies of the ruling party. He has been denied his basic needs. He is faced with a perpetual food crisis. Food production is under-planned, under-estimated and under-financed. Naturally food sufficiency is not within sight. He has to depend for his subsistence upon foreign generosity. To this sense of uncertainty has been added the ever present dread of soaring prices.

"Slogans of social and economic programmes are mouthed by the leaders of the ruling party. But illiteracy persists. Attempts at organising high education are confined to unco-ordinated experiments. Nobility of work is loudly preached, yet unemployment flourishes, while our man-power the greatest asset of the country, is allowed to run waste."

There can hardly be more authoritative indictment of the wrong policies of the Congress regime in respect of the basic needs of the people like food, education, unemployment than what is pointed out by the Ex-Food Minister of the Union and Ex-Governor of Uttar Pradesh Shri Munshi, who himself was responsible for the execution of these policies for long in the present rule. The change of half a dozen Food Ministers at the Centre speaks eloquently of the failure of the Government's Food policy. With reckless spending on plans, the country had to import food-grains worth Rs. 1200 crores from foreign countries at the end of 13 years of the Congress rule.

The failure of the Congress regime in meeting the most basic need of the people (Food) after 13 years of its rule inevitably demands basic political change and a new administration to turn this failure into a success. The country pins its hope in the progress of the 'Swatantra Party' which may be destined to play the historical role of this much desired political change and provide the country clean, efficient and impartial administration which the Congress rule has failed to do.

GROUP DOMINATION IN VILLAGE PANCHAYATS

By: M. A. SARMA

I Introductory

The problem of group domination in village panchayats assumes special significance particularly when India is trying to have a democratic decentralized administration. In this connection the lead taken by Andhra Pradesh and Rajasthan in accordance with the recommendations of the Balwant Rai Mehta Committee is highly commendable. But it is feared that with constantly conflicting forces and numerous groups and tensions developing in village panchayats the hopes may be frustrated. Hence they require careful attention.

In order to explain the phenomenon of group domination we have surveyed the Vemur village Panchayat which exists in Tendi Tehsil, Guntur District, Andhra Pradesh. The village panchayat covers the population of 5,800, and it has an annual income of Rs. 25,000/–. The size of the panchayat boby is of 9 members including one co-opted woman member. It is a class II panchayat but as its income is high and forms grade II, it has been in 1956 subjected to the notification and thus a whole time Executive Officer is appointed by the Inspector General of local Administration. He is responsible for the maintenance of records and also for the proper execution of panchayat Acts. The study has covered the working of the panchayat during the period 1956–59.

II Meaning of group domination

In fact there is no clear cut defination of the term group domination since the nature, extent, causes and consequences differ from one group to another or from one village to another. Groups and sub-groups are generally based on caste, creed, economic status and political affiliation, etc. Among these, groups conflicts arise every now and then. Each group tries to have greater opportunities and power to dominate over other groups. In the administration of village panchayat such groups want to capture or to hold power and rule according to the likes of its own members.

Group domination, therefore, is a phenomenon resulting in the exercise of authority by a group of members who by virtue of their being in power—due to their majority or physical strength or administrative, social, economic, political and other capabilities over a particular inhabitation—enjoy greater privileges than and paramountcy over the rest of the inhabitants-few of whom having groups of their own. The group which holds a dominant power works mostly for its selfish ends at the expense of other groups or individuals.

III. Nature and Areas of group domination

Group domination in this panchayat is characterised by the features of corruption, bribery, faction, litigation, selfishness, favouritism and antagonism, etc. The panchayat president who is the leader of the group is a rich person. The survey showed conclusive evidence that by offering bribe and also by taking advantages of the ignorance and low economic position of the members the president became the leader of the group. The programmes and policies of the panchayat were carried on by the panchayat president or leader himself. In course of time this group could get support from one of the two powerful factions in the village, and thus exerted absolute domination in the administration of the panchayat and other matters of the village.

The leader of the group did a lot of injuries to the members of the rival group. He raised the house tax on his rivals more than double by increasing the capital value of the houses. For instance, in the case of one of his opponents he increased the capital value of the house from Rs. 25,000/- to Rs. 40,000/-. Moreover, he used to threaten those who did not pay tax in time by sending their named to the district court for necessary action.

All activities of village development work were confined to members of this group. The construction of new metalled and earthen roads, location of pipes, tube wells and lights were made in a way so as to benefit the party supporters. In order to please the majorty consisting of low caste members the president sanctioned massive roads without knowing the fact that the drainage will be chocked and during the rainy season rain water will enter the low level thatched huts belonging to the poor people. Even in the location of tube wells and cement pipes only the members of the group got the opportunity of having those near their fields and houses. Several contracts were sanctioned to those who belonged to the dominant group without proper publicity. For instance, it is said that one member constructed a house which costed about Rs. 5,000/- out of the money saved from these contracts. The lowest amount of house tax was lavied on those who belonged to this group.

In August 1959 a festival was observed to honour the village goddesses who were believed to protect the village from all sorts of evil spirits. It has been a tradition that during the period of the festival the participants from the Mala untouchable caste shall not wear a ring composed of small bells near the ancle and if it is done the members from the Madiga caste, another untochable caste, have the right to fight with or even to kill the persons who wear bells. The former caste during the festival, however, wore the forbidden rings and a clash took place between the two castes. The reason for this was that the president's party supported the Malas to do so, and the Madiga, on the other hand, were encouraged by the anti-president group. In that way the festival was suddenly stopped. However, the next day, as the villagers were already afraid of the dangerous consequences from the evil spirits, both the parties arrived at an agreement to follow the old custom. But in fact from that day onwards the social solidarity of the village as a whole has been disturbed due to the conflicts between these two groups.

Again, it was surprising to note that the president tried his level best for the permanent closure of the village High School. Due to shortage of funds and inadequate accomodation the District Board authorities closed the High School. The village, forming a committee promised the District Board and District Collector that within a year or two they would collect funds and also construct the necessary buildings. Meanwhile a deputation from the president's group having president as the leader approached the Collector and pleaded that it would be impossible to collect funds from the villagers because the persons who once collected for such purpose misappropriated the funds instead of using them for the development of the school. Really speaking, they did not want the school at all. Thus for one year the school was closed due to adverse propaganda. However, due to the successful steps taken by the other village leaders the high school was again sanctioned, and they fulfilled the promise by constructing the required buildings. But the fact to be noted here is that due to the feelings of hatred between these two

groups they did not care even for such important problems in the village such as High School, and the construction of Hospital etc.

In the political life too there existed two divisions in the Congress party the one comprising of the persons from the president's group and the other from the anti-president group. During the elections for the pradesh Congress Committee the president with his influence was able to cancel the Congress membership for those who belonged to the rival group. It has been a surprise to all the villagers that some of the Congress members who have been in the Congress for very long lost their membership due to the influence of the young president. Again, the president once invited police to cancel the meeting conducted by his rival group in connection with the bye-election propaganda. When the rival group leaders distributed pamphlets about the actual corruption and malpractices that were taking place in the panchayat with particular reference to the president, the latter filed a defamatory case against one of his anti-group leaders.

IV. Consequences of Group Domination

The feelings of hatred caused by the group domination in the village panchayat prevented the growth of harmonious relations among villagers. The village due to the conflicts intensified by the panchayat administration, has been divided into two groups. A large section of people was constantly hating the panchayat members, instead of supporting the actions done by them. The unity and social harmony, the solidarity and co-operation in solving the complex problems confronting the village almost seemed absent among the people.

(a) Neglect of important functions

Some important functions which are to be performed by the panchayat were neglected. For example, the village panchayat court did not function satisfactorily. It was started functioning only in the last year of the panchayat period and could hardly remain functioning for two months. During this period 22 suits were filed and out of these only 8 were compromised, and the rest remained unsettled because the panchayat members showed little interest in attending the court. Moreover, when suits were filed against the President the latter by becoming angry dissolved the court, and thus the life of the panchayat court came to an abrupt end. Here it is to be noted that the whims and fancies of the president and group members rather than Acts and Laws govern the panchayat.

Secondly, several neighbouring villages which are even smaller than Vemur have been provided with electricity. Vemur could not get electricity due to the fact that the village panchayat had not sent the village plan, by which alone the Electricity Department can place the electric poles in the desired quarters of the village. When the villagers asked the leader of the dominating group as to why the panchayat delayed the sending of the village plan, the latter replied that previously he had done so many important things for the development of the village, but as they were not appreciated by the villagers he naturally felt disinterested in that affair.

Thirdly, due to the conflicts intensified by the existence of dominant group in the panchayat, the construction of Hospital has been very much delayed. The villagers since a long time wanted to constuct it by collecting funds from among themselves and with an amount from the panchayat reserve fund. But due to the conflicts nobody took initiative. When the leaders from the rival group offered themselves to do the

job the members from the president's group objected to give funds. Moreover, they insisted that the site of the Hospital must be shown to them. They wanted that the Hospital should be in their own locality. Similarly, when the village High School Committee which comprises of the members from the anti-president group requested the panchayat to sanction money for the construction of buildings, the panchayat president refused to do so. In this way many important activities have been neglected.

(b) **Waste and Corruption**

It cannot be denied that the village has developed to a great extent in comparision to the period prior to the establishment of panchayat. Several massive earthen and metalled roads were being constructed, and the whole village was lighted with petromax and kerosine lamps. As many as 26 wells were constructed for the benefit of the lower sections of people. In the field of public health and sanitation drainage system was improved; sweepers were being appointed; dust bins in all the important centres were placed.

But one can easily notice that selfishness and corruption were at the back of all such developments. The money spent on various development activities to the extent of about 1 lakh rupees amounted mostly to a waste. The temporary lighting which costed about Rs. 10,000/- proved a great loss to the panchayat. It remained only one and a half year. Moreover, every one knew that the village will be getting electricity in a year or two. The panchayat at the end had not enough money to spend for the expenditure on kerosine and to pay the servants. Hence the lights were removed and out of Rs. 10,000/-only 900/- were recovered when all the materials were auctioned.

In the same way, the money spent on tube wells has proved fruitless, out of 26 tube wells at present only 4 are reported in working condition, and for the remaining 22 the repairing charges cost at the end was about one fourth of the original cost of each tube well. Again, Rs. 3,000/- spent on temporary drainage system which was partly washed away and partly levelled by heavy rains, was also a waste.

Thus out of the total expenditure on various development activities only 40% percent is said to be useful and the remaining 60 percent is fruitless and mere waste to the panchayat. The village has not improved in proportion to the money spent for these undertakings. Selfishness, favouritism and corruption were the causes of such waste. It is alleged that the President alone (the survey revealed) has misappropriated Rs. 14,000/-. The economic position of the members of his group was also improved in comparision to that of the rival group.

(c) **Formation of factions in the village**

The factions which have had their origin in the traditional Social system of the village were further intensified by the formation of dominant group in the panchayat. After the panchayat elections the two powerful faction groups which have been existing since a long time took a new shape, viz: the President and anti-President groups, and remained hostile throughout the panchayat period.

In order to inform and make the people understand the corruption and mal-practices involved in the panchayat the members of the rival group formed into an organised body known as the "Grama Abhyudaya Sangham" or the village development society. It had tried its level best to safeguard the panchayat out of the mal-practices by organising meetings in the village and innumerable notices were sent to the higher authorities. The question was raised even in the State Legislative Assembly.

The role of these faction groups and their leaders was intensified during the bye-election propaganda. Both the parties organised meetings and criticised each other. In one of the meetings both parties exchanged hot words and when they were about to fight the meeting was closed suddenly. On several other occasions these faction groups have openly differed and badly criticised each other, use of force and violence have also been noticed.

(d) **Increase in litigation in the village**

Though majority of the villagers is afraid of the risk and waste of money that one has to incur in attending the law courts in distant urban centres, still for some it is a sort of a hobby. They are anxious to appeal in a higher court when a case or suit is dismissed in lower court. Thus during the period 1956-59 as many as five important suits were filed in various courts other than the panchayat court. Out of these five, two were filed against the president himself and the remaining three were against the rival group leaders. The people are so jealous of each other that they want to take revenge at any cost. They are spending a lot of money and time in attending courts. Cases are filed on petty matters.

The overall result is that the old solidarity of the village is broken, and the village is divided into two hostile and frequently fighting groups. Factions, litigation, corruption, self-interest, favouritism and antoganism are the common features of the panchayat rule. The whole phenomenon is puzzling and frustrating.

However, it has taught a good lesson to all the villagers. It has been able to cause many villagers to think that a new order in the village community will not be built unless and until all of them move together. There may be disagreement over and rejection of the means which the development programme would employ, but there must be unanimity in the ends that promise the success of panchayat Raj and the common action. The growing of such a feeling amongst some people at least is a welcome sign.

V. Forces and factors leading to group domination

(a) It was commonly reported during the investigation that the bribe offered by the panchayat president who was the leader of the dominant group attracted a large number of panchayat members and in this way he also secured support from a powerful faction group in the village.

(b) The old ties and loyalties which lead to constant bickerings and deadlocks and the consequent division of the village into two opposite parties added an additional strength to the group in power. The old leadership in the village has, no doubt, lost its position in the panchayat. Still at the back of it the mighty force of old leadership of the bygone days has been troubling constantly in every sphere of panchayat administration and has polluted the peaceful atmosphere of the village. These old conflicts rise to climax during elections.

(c) Illiteracy or low standard of education is one of the basic factors responsible for the evil consequences that occured in the panchayat. It is noticed that 33 percent of the panchayat members were illiterate, and among the rest 67 percent literates 33 percent have only primary or elementary education. Due to illiteracy and ignorance of the Panchayat members the president tried and was successful in exploiting any situation like demanding signatures or thumb impressions prior to resolutions being actually passed. About 80 percent

of the members were not conversant with various Acts and procedures of the panchayat administration. The members who had been aware of their own incapabilities wait for the verdict of the president and all the schemes put forward by the latter were thus usually approved.

(d) The mal-functioning of the panchayat institution in the hands of the dominant group to a large extent can be accounted to the defect in our official apparatus. The corruption and mal-practices in the panchayat had been encouraged and even shared by the officers from top to bottom, particularly at the latter rank. Inspite of the fact that a number of notices have been sent even to the Inspector General of Local Administration and from where those were directed to the lower authorities for proper action yet all this proved ineffective. It has been alleged that the Panchayat Executive Officer (the investigation revealed) misappropriated an amount of Rs. 12,000/- by joining hands with the president. Even higher authorities such as the District Panchayat Officer, Deputy Panchayat Officer, Audit Inspectors were not beyond suspicion.

(e) Finally, the defect also lies with the method of election. Eventhough the Vemur village panchayat adopted the method of unanimous election except in a bye-election, yet the method of selecting the members was not on the basis of proper qualifications. The members who had no interest and who were least conversant with the panchayat Acts were elected.

VI. Methods of eliminating group domination

(a) A minimum educational qualification must be prescribed for all the panchayat members. Necessary training must be imparted to all the office bearers. Educated members cannot be deceived easily.

(b) Administration should also be efficient and honest. Only then a strict supervision of panchayats will be possible.

(c) In order to check the evil consequences of factionalism and groupism in panchayat and also to maintain law and order in village, a separate Nyaya Panchayat on the model of Utter Pradesh (Adalati Panchayat) should be established for every panchayat Mandal which consists of a group of panchayats. This will help in better administration of justice and will give better protection to people.

(d) There should be a provision in the Andhra Village Panchayats Act for the vote of non-confidence against the president when the panchayat members lose confidence in him.

(e) Over and above all these each and every individual or group of individuals must try to remove all seeds of conflict and realise the responsibility and should develop a sense of duty towards the village. So long as the members are self-centred and corrupt such a panchayat cannot achieve its ideals of prosperity and rural democracy. It is only when people as a whole rise in moral stature that real solution will be found out.

OURS IS A POLICE RAJ

By: NAUTAMLAL C. TEJPAL

WHAT distinguishes an individual as a private citizen from the same person as a Government's Agent ? A government's agent is formally, officially, and quite properly, in league with the police power. Let the police force backing be removed from any public servant and he is changed to a private citizen.

Private citizens Shri Rajagopalachari and Shri T. T. Krishnamachari differ from Governor General Rajagopalachari and Finance Minister T. T. K. by virtue of their altered relationship with society's police force. Consider the significance of this altered relationship. When men organise into collectives to accomplish certain aims, and succeed in getting the police force behind their collectives, they bring into existence the social structure which we call Government. Their resolutions become decrees. When they resolve that you and I shall be hanged for murder, or put to jail for stealing or pay the deficits of State Trading Co-operation, or pay for the loan to Egypt or guarantee the income of Governors, we obediently respond, or else reckon with the police force. Government properly so called, can never be reduced below two elements : a collective affixed to police force.

Imagine, for example, all government personnel-Central, State, and local ; legislative, executive and judicial-organised exactly as they are now but without any police force backing whatsoever. Their pronouncements would be reduced to those of private citizens ; merely advisory, not compulsive. Without the police force, their resolutions would be on par with those issuing from a Chamber of Commerce or from a League of Women's Welfare. They might resolve that all of us should donate to the prosperity of cottage industries, and their resolution would have no more compulsive weight than an advertisement urging us to buy more Khadi cloth. It is the absence of police force backing which explains why Shri Rajagopalachariji's current deliverances are taken so much less seriously than were Governor General Rajaji's pontifications.

So, it is only the police force affixed to a collective that makes the existence of government possible. It is the element of police force which is essentially the distinctive feature of a Government. To determine what government ought to do would seem to require nothing more than a reasonable determination of what the police force ought or ought not to do.

The Clenched Fist

What in essense is a police force ? When correctly defined, is it anything more or less than the STRIKING POWER in each of us organised into collective striking power ? Striking power can be symbolized in its most rudimentary form by the clenched fist. More advanced symbols would be lathi, guns, fighter planes, atom bombs.

What can the clenched fist accomplish? It can hurt or punish. What, in good conscience, ought to be punished or destroyed ? Violence, fraud, robbery would appear to qualify.

What can the clenched fist not accomplish ? It cannot discover, invent, produce or create. Nor can its striking power cause others to discover, invent, produce or create. For instance, this striking power cannot achieve the Plan or produce a housing project. It is, by

its very nature, a repellent or defensive, not an attractive or creative force.

Man's energies manifest themselves either destructively or creatively. Which defensible code will assert that any individual has a moral right to use his striking power against the productive or creative actions of another or others. A repellent force cannot be made to create. As for instance, we have wealth tax and estate duties, which are collected by the Government backed by police force. The result of these taxes is that no man having a sensible mind, would invest in building tenaments; so we shall continue to suffer housing shortages indefinitely. The desire to build and create has been supressed by the unreasonable taxes.

A police force is nothing but organised striking power employed by a collective. It has no features to distinguish it from the striking power of the individual beyond size, power and organisation. It is merely the clenched fist multiplied, mechanized, organised and embellished with titles, uniforms and other trappings. Its proper boundaries of action are derived from and prescribed by precisely the same principles that pertain to the individuals who compose and organise it. The individual has the moral right to restrain the destructive actions of others. Morally, his striking power is limited to this right. This right is in no sense widened by two or any number of individuals combining and organising.

Those who argue to the contrary-who contend that the collective striking force is morally warranted in extending itself beyond the area consonant with individual rights-must, if their contentions are not to be groundless, point out the source from which any extra rights derive. If not from the individual, then, from whom or what ? Surely not from God as the devine-right-of-kings theory had it ! Are not rights, as the right to life and the right to sustain life, exclusively vested in the individuals ? No right, any more than immortality, is to be ascribed to an abstraction, organisation being no more than this.

The Right to Defend

We often hear that government-a collective linked to the police force-has the function of doing for individuals that which they cannot do for themselves. This is correct in a sense, but is open to easy misconception. The individual cannot protect himself against decoits or mobs or countless other forms of destructive actions. Government should do for all of us that which we have a right to do, but cannot do for ourselves.

However, we have no right as individuals to use striking power against the productive or creative actions of others for the purpose of feathering our own nest. By the same token, we have no rights collectively to use striking power for these purposes. For example : At this juncture in our development we would probably not freely donate enough funds to build a television station or manufacture Hydrogen Bombs. There are among us some persons who want this to be done. They lack the resources to do it themselves. Therefore they call on the police to forcibly take the fruits of labour of others in order to gratify their wish. All subsidies or grants-in-aid, whether to the backward community or to the industries, fall into this category-a misconstruction of the idea that government should do for us that which we are unable or unwilling to do for ourselves.

Immoral use of power

Police-ism-police power run riot, the uneconomic and the immoral use of striking power-is man attempting to usurp the role of the Creator on grand scale. Police-ism-Government out-of-bounds-known

as state interventionism, communism, socialism, nazism, fascism, the Welfare State, the planned economy, and so on, features the private gain of some at the expense of others. Its advocates are in all walk of life, ranging from seekers after office or after self–welfare or after prosperity to religious men who have lost their faith in brotherly love. This is the most glaring sin of our age and it accounts, more than anything else, for in the social disintegration now observable in every 'civilized' country. In Bhagavad Gita it is said that sin is not the violation of a law or a convention but ignorance–that assertion of the independence of the ego which seeks its own private gain at the expense of others. These uneconomical and immoral uses of striking powers within nations account for the insane employment of striking powers, between nations-wars !

Let us assume that we agree on what is the proper use of striking power : only for defense against destructive force. Would this agreement on principle resolve all of our social problems ? Of course not ! Our judgement varies greatly. It would be difficult to agree on whether certain actions were destructive or creative. Yet, having an ideal, general principle as a common point of reference would help to direct our energies and thoughts toward the ideal. We would more likely demand the same moral rectitude of our collective actions as we insist on what is proper for our individual actions. We can hardly expect to behave better collectively than individually. Yet, there is not much excuse for behaving worse.

Double standard of morality ? Imagine our industrial workers personally robbing every one from the poor widows to Mr. Birla, justifying the robberies on the ground of being reimbursed for producing less than they could. It is unthinkable. Yet, there is hardly a respectable segment of the population that is not urging the police force-the collective striking power-to do the same unthinkable thing for them. The police force is no better than the labour unions. Thus by failing to apprehend a principle, we descend deeper and deeper into policeism, the final stage of which is dictatorship. "Dictatorship" if scientifically considered, means neither more nor less than unlimited power resting directly on the police, not limited by anything; not restrained by any laws, nor by any constitutional limitations of any kind.

Certainty Of Retribution

Most of us realize that error brings its own retribution. Nor does the ignorance absolve us in any measure. One who is ignorant of the law of gravity and jumps off the Kutub Minar hits the pavement no less resoundingly than does one who jumps and knows.

We believe it to be immoral to advance our own private gains by robbing others. We would expect penalties in some form-social, like being put to jail or like a loss of self-respect. Now, legalizing the process in no way alters its morality nor the certainty of retribution. Yet, after years of legalized plunder, as our present taxations are, few of us discern any penalties for our political waywardness. The popular slogan, "We have never had it so good," seems only to say, "At last, we know how to do wrong and to get away with it."

Excessive governmental activities may for some years give outward appearances of making us healthy, wealthy and wise. However, those actions which have really been wrong must be building up quite an account on the retributive side of our economic, moral and social ledger. The fact that most of us haven't taken the pains to look for this page in the

ledger, doesn't mean that it isn't quietly-almost secretly-recording the data for later reference for balancing the account. If any one would care to look at this page, he would see material retribution taking form of a thinner and thinner circulatory medium-a progressive economic anaemia.

The only cure for this dangerous disease is to withdraw governmental interference from the productive and creative activities of the people. The first step is for responsible citizens to identify activities of this sort which government has arrogated to itself and to explain attractively and persuasively why they should be returned to private enterprise. This will require the best-nothing less-that each of us has to give...

(The article has been adapted from the writting of Leonard E. Read., the American Monthly "The Freeman")

THE 'MAN' AND THE 'ECONOMIC MAN'

By: **S. N. JHA**

CAPITALISTIC movement in its wake overshadowed ethical value in man blending him into what is called 'Economic man'. One of the important social sciences, Economics makes this 'economic man' the nucleus of the subject matter surrounded by all sorts of discussions pertaining to attainment and spending of wealth. Isolating this 'economic man' from other species of human beings his activities were made quite distinct and specific and permitting him to be above all, quite independent, under the protection of what is called 'lassez fair' supposed to be always acting on the principle 'Maximum satisfaction with minimum efforts'.

In countries like America and Europe where there was abundance of resources and scarcity of man power, this principle from the point of view of materialistic craze alone served the purpose of the day. It brought materialistic prosperity to a few for a time, neglecting not only a balanced and even development of society but enslaving the common man shunning all ethical and moral considerations and heralding the 'economic man'.

Under the circumstances humanity was divided into the 'Man', the common real man and the supposed 'economic man', the man entering into the field of production, consumption and exchange of wealth, leaving aside the other and more important aspect, equitable distribution of wealth. The most characteristic feature if this division of society was that those who belonged to the ethical sphere were branded as saints, humanitarians, spiritual and cultural man etc. whose activities were not supposed to come in the orbit of the society and hence away from the discussion pertaining to the activities of the 'economic man'. These together with other species of the genus 'the man', other than the 'economic man', might do whatever they liked and could die of wants unnoticed and uncared for by their fellow being 'the economic man', for the reason that they did not enter the arena of the 'economic man'. To fortify the power of this 'economic man' the Art and Science of production and consumption of wealth was regarded as a positive science whose duty is to study 'what is' and not 'what ought to be',

Thus a concentrated current of materialistic craze was generated and there was a race the world over for attainment and accummulation of wealth. Utilitarian slogan like 'Greatest good to the greatest number' came again to the rescue of the 'economic man'. This artificial and conjectural division of society reacted differently in different countries. Whereas in Western countries it produced somewhat better results than in Eastern countries, the latter specially those which were known as Dominions were badly affected. The force of circumstances in the latter countries were against the following of the doctrine of economic man hence no sizable section of the society could achieve the material progress as in their counter part, the Western countries. The story did not end there. Though a country like India is famous for its spiritualism, ethical and moral set-up leading to the principle of 'universalism' yet in the disturbed and confused circumstances its fabrics of adherence to universalism cementing the society into a common benevolent and non-violent ideology shattered altogether giving rise to no parallel gains but producing unparalleled evils.

Under the same circumstances India became an independent democratic country striving for a new and modified social, economic and political policies. Leaders like Gandhi and his followers offered the solution which was a compromise between the ancient model ideals and the modern scientific and up-to-date current of ideals with a view to retaining the ancient fundamentals modified to suit the present-day developments. This is called the Sarvodaya ideal or 'Greatest good to all', as against 'Greatest good to the greatest number'. Under this scheme economic and social considerations uptill now governed by dry specialised or compartmentalised considerations devoid of ethics have been subjected to ethics and thereby checked the uncontrolled hankering after material wealth. Leaders after Gandhi though retaining the empirical Gandhian principles thought of dilution of the latter to fit in the world social structure. In essence Gandhian socialism is substituted by a form known as Socialistic pattern of society.

Alongside with these two views of the principles to be followed in bettering the conditions of the country the old residual capitalistic followers of 'economic man', still retain the old view after some patching. The resultant of such a situation is that ethical considerations have become altogether absent, not only amongst the followers of 'economic man' but amongst the rest as well. Ethics is conspicuously abesent in officials, businessmen and general people. One example of this lack of ethical consideration amongst the official class may be cited here. According to the Accounts rules an official who is empowered to spend public money is required to exercise the same vigilance and care in using public money as he is supposed to exercise in the case of his own wealth. If data is collected it will reveal utter lack of this consideration. If an article costs say Rs. 5/- to an ordinary buyer in the market, the same article costs to the State twice, thrice and four-times of this cost, depending upon the officials' capacity to be closer or farther from the gravity of ethics.

Because the people have been hungry and naked for a long time the sections other than the 'economic man' of the society have gone much farther from ethics than the species of 'economic man' to prove the proverb, "बुभुक्षित: किं न करोति पापम्". The Western countries too saw the loop-holes of the lassez fair and favoured planned economy and today

the world is surcharged with the word 'Planning', in one form or the other.

No sooner the distinction between the 'man' and the 'economic man' is broken down to make the two an amalgam believing in the 'wholeness' of life, permitting ethics to have its sway, a balanced growth of the society will be visible. This condition, if ever comes, will lead the society to progress and contentment. Unless each and every member of the society becomes contented there can be no peace, whether there is atomic development or no development. The Gandhian formula of reviving Varnashram Dharm in a modified form meaning, 'following on the part of us all of the hereditary and traditional calling of our forefathers, in so far as the traditional calling is not inconsistent with fundamental ethics, and this only for the purpose of earning one's livelyhood', offers the best solution to bring about desired peace and contentment. Unless we restrict our wants no materialistic race can be regulated. The reason why none of the above principles of Sarvodaya in its original form or diluted ones, is able to permeate the society is lack of bridge between the precept and practice or correlation of knowledge with action. To bridge this gulf Gandhi started Ashrams to train practical idealists. In the form of Ashram vows the trainees were to regulate their various activites to attain an amalgam consistent with the need of the country. This arrangement after Gandhi is non-existent now. Once a principle is thoroughly practised by a sizable body of society in all aspects of their lives, it will be very easier for the ideals to permeate the hard strata of the present society to exhibit its effects.

In conclusion, it is surmised that the greatest need of the day is to give practical effect to the Sarvodaya or 'Good to all' ideal abolishing all artificial distinctions in the life when alone marked alround improvements may be witnessed. How to do is a question for everyone to think and act.

PRIVATE SECTOR V/S PUBLIC SECTOR

By: NARENDRA KUMAR KULSHRESTHA

PRIVATE sector strictly speaking symbolises a non-official sector that includes not only the industrialists and traders but also Engineers, Doctors and Agriculturists. Public sector on the other hand includes enterprises not only controlled and regulated but also run by Government officials.

With the adoption of 'Mixed Economy' as the pattern of our economic advance, the comparative role of public sector and and private sector has been given a wide lattitude of feeling. Probably it would not be inappropriate for us, therefore, to examine their comparative claims so as to conclude a dispassionate view.

Claims for Public Sector

The advocates of public sector feel confident that its expansion shall not only give a blow to the concentration of wealth but shall also reduce inequalities in the distribution of incomes, wealth and expenditures. Over all it will tend to eliminate the 'Haves and have Nots' of the society, created mainly by the private sector and thus is expected to lay the solid foundations of our infant democracy. Even under the directive principles of State Policy of our Constitution, State is assigned a duty to see that the scarce means and material resources of the community are so distributed as to best

subserve for the common good. As such the State cannot be expected to remain as the passive on-looker but shall have to take positive steps. Hence Public Sector's expansion is a logical step in this direction.

The Private Sector is primarily motivated by private profits and so the activities which generate maximum social advantage are hardly undertaken. Public Sector is motivated by social profits and so shall forge ahead with the plans to construct roads, hospitals, irrigation and power projects etc., which constitute the social overheads of our economy.

The Public Sector is also defended on the grounds of better capital formation because firstly an appeal to the citizens to invest their humble savings for the country's economic and industrial advancement can hardly go unresponded. Sccondly the profits of industrial undertakings in the public sector shall be channelled into the direction of productive uses. Thirdly suitable financial and monetary policies can be framed by the public sector to accelerate the rate of capital formation. It is thought that the public Sector shall not only wipe off the evils of factory system but shall evolve a co-operative outlook between the labour and capital which would mean low industrial upheaveals and consequent higher industrial productivity.

Opinions also go in favour of public sector because its expansion shall lead to decentralisation which is very essential for the balanced development of urban and rural sector and fuller utilisation of local labour and local talent. Besides under public sector better co-ordination of industries and higher gainful employment is possible.

The public sector also plugs the loopholes of private sector. Private sector no doubt has done Yeoman's services in the field of promotional and the managerial activities but that too mostly with a view to secure its permanent interest in the company which it took in its hand. It is responsible for launching unfruitful schemes in the industrial field which led to national waste of our scarce means. This happened during the Second world war. Further the case of Bharat Life Insurance Company in which the Public money was misused for personal ends is still fresh in our mind. All these things create panic in the public and it loses the confidence in the ability of Private sector to promote the industries. Hence savings of individuals are hardly attracted to industrial investment. Moreover the private sector by acting as a promoter, manager, financier has made the industries as its puppet and exploited them too much.

An attribute of conservatism is also attached sometimes to the Private sector. It has promoted mostly those concerns in which the capital investment and risk was less, but the profit was more and immediate. So our mining and exploring industries had to suffer a lot. Again because of its slenderness of financial resources it has not been able to equip the mills with upto—date machines. It is said that machines in the textile mills are worth being kept in Museum.

In a planned economy the private sector cannot function with the State control and hence here comes the role of public sector. The analogy according to Mr. T. T. Krishmanachari is that "If wild waters in the rivers are not controlled, not merely they will flow out into the sea but they will also from time do damage in the shape of unforeseen floods'. In the same way if the country's resources are not utilised to the maximum and not ensure maximum benefits, the role of State comes in.

Claims for private sector

Private Sector is justified on historical grounds. At the time when financial, technical and promotional talent was not forthcoming for our industrial development a group of persons pooled their resources and established the various industries like Iron & Steel, Jute and Cotton textile etc., inspite of the apathy of British Government and improper industrial climate. They had to suffer huge losses in the beginning and gradually if they have come to the present standard, the public sector should not feel envy of it. Not only this, the public sector must acknowledge that whatever meagre industrial development India has, it is only because of private sector. Thus private sector is primarily responsible for giving a place to India on the industrial map.

The protagonists of Private sector however believe that the claims of Public sector are quite untenable. The ideal of reduction in inequalities of incomes and wealth can be achieved by suitable method of legislation and not by usurping the legitimate right of private sector. If private sector is motivated by private profit, then let the State tax and take a lion's share of profit and spend it on "social overheads" of our economy. If private sector has led to the concentration of wealth, will not public sector amount to concentration of power (economic & Political) at the hands of State. Probably State wants to become autocratic which is entirely in contravention to the directive principles of State policy as embodied in our Constitution.

The enthusiasts of private sector however feel confident that the argument of decentralization which supports public sector has hardly any substance. If private sector has led to the concentration of industries at one place, the Govt. can regulate the locational aspect of industries and which it is already doing while granting license to industries. Moreover if Government wants to have balanced development of rural and urban area, then the remedy lies in granting concessions to private sector, so that they may also be attracted to new sites and places.

Private sector is not conservative. Certain improvements on technical side in various industries like: Scrap carbon process in Iron & Steel industry; automatic loomes in Cotton textiles, Electric moisture meters in Jute textiles are quite enough to refute the charge of conservativeness.

It is hardly questionable that in a public sector whole of the profits are at the disposal to be utilised for further industrial development. But this object can be achieved by providing proper incentives to the private sector so that it may 'plough back' its earnings by suitable legislation. The State can fix the minimum amount which the private sector is required to plough back.

Then the public sector has certain deficiencies. It is managerially inefficient. The good administrative officers need not be good business managers. Even the public corporation type of Management is hardly efficient. This is evident from the loss caused to Life Insurance Corporation due to political presures. The industrial finance corporation also lost Rs. 50 lakhs on Sodapur glass works due to nepotism.

Quickness of action and promptness of decision are very necessary in business enterprise which are entirely lacking in public sector due to too much red-tapism. Moreover in public sector industry it is feared that there will be a long term adherance to any industrial policy due to changes in Govt. body in democratic countries. It lacks incentive,

adventurous experience, promptitude, speculative foresight and driving force which are the backbone for industrial success. Again areas allocated to public authorities are determined by non-commercial considerations. Its expansion shall also prevent the free play of economic forces and will create artificialities in simple price mechanism. It will be an apt illustration of the saying that where the State trades, people are paupers. Hence the advocates of private sector are of the opinion that a mere profit of lakhs of rupees should not sweep the Govt. to deviate from its proper role of guardians of the State.

Their respective roles in our country's economy

It will be very much difficult to assign different roles but certain principles shall have to be evolved. The basis of controversy seems to be that private sector and public sector are alternative to each other. This means that one can exist only at the cost of the other. It may be true to some extent but viewing the country's economy as whole, both have enough scope for their promotion. Probably both private sector and public sector must consider themselves as the two aspects of a single coin. Where it is desired to benefit consumer by providing him quality products at reasonable price the competition of private sector and public sector is quite desirable because inefficient and uneconomic units whether of public sector or private sector must go out of economic horizon. Thus they form the two parts of single industrial organism.

Private sector on the other hand should appreciate and realise that in a Welfare State, State cannot be a passive on looker. It will have to see that scarce means and material resources of the society are so distributed as to best subserve for the common good. Hence wherever the society's interest is to be kept uppermost and individual interest subordinated to it, public sector will and must expand its activities.

Private sector can now justify its existance so long as it serves public purpose. It must realise that in a growing economy the chances of its success are limitless but in an under-developed country like India, it will and must accept State regulation and control. Nevertheless there are certain industries like: (1) that of monopolistic nature as railways, Post & Telegraph, Water, gas & Electricity. Here private sector cannot be encouraged because of remoteness of reward (2) control is desirable in political & strategical considerations as Arms & Ammunitions and Atomic Energy (3) where individual cannot guard his interest as that of Wine industry which should come under public setcor. The private sector should not feel envy of it.

What the country will probably need shall be co-operative sector where private sector and public sector shall assist and co-exist side by side. In such a sector the consumer industries may be left in the hands of Private enterprise because these industries require less capital, less risk while the profit is immediate. The capital goods and basic industry shall remain permanently in the hands of public enterprise because they require huge capital risk while the reward is remote. Moreover they have political-cum-strategical importance.

Whether private sector will have a place of minor significance or one in which the private sector can also be in the vanguard is the most debatable question. This will depend on according to Mr. T. T. Krishnamachari (1) its ability to assist in capital formation (2)

by the ease and rapidity with which it can socialise (3) the degree of restraint it will exercise on its profit motives. Thus the place of private sector in the economy of the country is entirely in its own hands to decide.

A REFLECTION ON PLANNING FOR THE THIRD PLAN

By: K. P. JAIN

THE Third Five-Year Plan is on the anvil. India has embarked upon a stupendous plan of economic development since 1951. India's 400 million people are on a voyage of progress and prosperity. Planning is a continuing and continuous process and as we are approaching the end of the Second Plan, the need for a critical and serious reflection on and an analysis of the approach to the Third Plan becomes natural and evident; and certainly we are having an appreciable loud thinking from different quarters. The two plans laid foundations of a democratic planned economy, and the tempo of development created by them is to be maintained, carried forward and stepped up further. The Third Plan is a major step in the surge and stride forward towards the continuous process of economic rejuvenation.

Main Objectives

While reflecting on the Third Plan the first need is to focus and pinpoint our attention on the objectives of the Plan. The general consensus of opinion in this context, and which is certainly rational and reasonable as planning is a continuing process, is to broadly accept the main objectives of the Second Plan, though adjustments may be necessary here and there with difference of accent on one aspect or the other. Hence the broad objectives may be stated as: (1) Sizable increase in national income; or putting it differently, considerable increase in production, both agricultural and industrial. (2) expansion of employment opportunities for the unemployed and under-employed. (3) reduction of inequalities in income and wealth. (4) Socialism has now become the accepted basis of Indian policy, but in this context the Third Plan should spell out the contents of Indian socialism very clearly without ambiguity, thus dispelling the fear and uncertainty in a certain section of Indian people.

In addition to the above four objectives we should certainly comprehend the following, realising their gravity and giving them due importance: (A) A proper population policy (2) A right educational policy in consonance with the needs of the country, we can ill-afford to neglect this vital issue. (3) A high rate of capital formation so as to pave the way for the realisation of a self-generating and self-sustaining economy. (4) and the last, but not the least, assessment of our defence needs in the changed and urgent context of Chinese aggression on our border and the provisions for the same in the Third Plan.

Priorities and reflection on different objectives

Now we come to an all-important issue of priorities among different objectives of competing claims. While ponder-

ing over the priorities we cannot think the Third Plan in isolation, the experience of the First and the Second Plans is before us to serve as eyes and ears. Though the experience garnered during the period of the two plans will certainly light up the difficult road of priorities, but simultaneously to avoid lop-sided decisions we should also keep in clear perspective the present conditions and situations as well as the needs and aspirations of the future. In other words to have a balanced, correct and objective judgement we should take the past, the present and the future in one fold.

I strongly feel that few will disagree on the fact that intensification of agricultural production and expansion of basic and capital goods industries should be the 'guiding lights' of the Third Plan. But it becomes very difficult to say which of the two should be given the top-priority. Both have so strong, forceful and pressing claims for the first place that ordinarily one finds himself in doldrums and bewildered to decide. But before opting for any of the side we must have a clear picture of their claims.

Let us first take up the case of agriculture. Now it is a common knowledge that agriculture constitutes the weakest link in the Indian economy and the recurring food shortages bear the testimony to this stark, grim and hard fact. The problem of food has become so difficult to handle that it has served as the graveyard of the reputation of so many Food Ministers in our country. An appreciable increase in agricultural production and especially food is needed, firstly to raise the present subsistence level of consumption to a higher plane to provide for better nutrition and efficiency of the people ; and secondly, to meet the additional demand on food resources owing to increase in population which is growing at a tremendous rate of 2 per cent per annum. Thirdly, for the growth of industrial sector too a continuous rise in agricultural production is a desideratum, agriculture must provide marketable surplus.

Again, the paucity of food and agricultural production will lead to higher prices of food, and this will induce a full chain of reaction leading to higher cost of living, higher wages, sympathetic rise in other prices, higher cost structure, fall in exports and the process will culminate in a rise in the Plan cost and in dwarfing the flow of internal resources and also suffocating external resources to the extent of reduction in exports. Moreover, increasing imports of food grains are a serious drain on the vital foreign exchange resources. In this context, Gunnar Myrdal aptly opines: "More food, however, India needs for every expansion of employment production and investment and it is in this sense that increase of agricultural production is basic to economic development of the country."[1] Yet increase in food and agricultural production is basic to India's developing economy in another very important way. Planning to common man means availability of a resonable amount of food and at cheap price because the proof of pudding is in its eating. In the absence of this basic necessity the vigourous enthusiasm and co-operation of common man, which is the 'fuel and petrol' of economic planning, will not be forthcoming and all the huge, tremendous and herculean efforts will come to naught.

Now let us come to the claims of basic and capital goods industries in particular and industrialisation in general. A strong and broad industrial base is a desideratum for economic

1. Gunnar Myrdal : 'Indian Economic Planning', an article contribnted in United Asia, November, 1958. p. 279.

development and a rapid one. A Strong and stable industrial sector is needed to impart strength to the agricultural sector of the country. We also need heavy and basic industries to catch up with the fast race of industrial and economic development in which the other countries of the world have plunged themselves. In today's world a strong and broad industrial base is the very life and strength of a country, we can ill-afford to relegate the industries to a lower place in the scheme of priorities.

In this context one more fundamental point to be kept uppermost in mind is that the Second Plan was heavy industries oriented and it has imparted a certain strength and tempo in the industrial field, we should carry the process forward with all the vim and vigour. If the economy is to emerge from backwardness and poverty we cannot cry halt to the very costly beginning that has been initiated in the industrial sector during the Second Plan. If we do it, we would put the huge efforts and money which had been ploughed in the sphere of basic and heavy industries to waste. To put it differently, it would be sucidal to put the clock of progress back. Again, a heavy and basic industries base is also needed for the vital attainment of self-sustaining and self-generating economy from the long range point of view. To quote Gunnar Myrdal, "Manufacturing industry represents in a sense a higher stage of production........Manufacturing absorbs the surplus labour of rural areas. It loosens the fixed social patterns, makes for a more dynamic culture and a greater willingness to accept innovation. A broad association seems to exist between industrialisation on the one hand and social and economic change on the other. *A purely agricultural country is likely to be unprogressive cven it its agriculture.*

Thus we see that both the sector—agricultural and industrial—have equally forceful and vigorous claims for the first place. One current view in this context is that basic and heavy industries must be given the first place, but agriculture must also be given importance by allocating much larger amount of money as compared to the Second Plan, and this is possible as the size of the Third Plan is bigger. *But I personally feel that at least in the Third Plan both the sectors should be given equal importance and equal amount of money should be allocated to them; First Plan was agriculture-oriented, the Second Plan was industry oriented, and, hence logically and otherwise also both agriculture and industry should be given equal importance in the Third Plan. At least in the Third Plan we must impart equal strength to both the limbs of the economy in order to avoid its lop-sided growth in the future and also to make it self-sustaining and self-generating.*

After deciding the priority issue between agriculture and industry especially basic and heavy industries let us take up some more points about agriculture and industry. First I will take up agriculture. More often than not, it is said that the food problem should be treated with the utmost sense of emergency of war-footing. Most of the recommendations put forward by various experts and committees have been accepted and incorporated in the food policy of the Government. Yet the situation has not improved to the desired extent. What is needed is a sincere, honest, and vigourous implementation of the well known methods and steps, viz., better and more irrigational facilities, better manures, better quality seeds, better credit facilities, use of modern implements etc. The pace of land reforms is to be quickened. A net-work of service co-operatives, on

which there is a general agreement of all the sections, should be spread across the country.

R. Balkrishna has suggested for the establishment of a 'Public Sector' in the field of food production.[2] But I feel that merely doctrinaire expansion of public sector into agriculture will not carry us far. Government resources are already burdened. What is needed is that the Government may establish some more State farms during the Third Plan by way of experiment and to gain experience. In the light of experience suitable number of State farms may be set up at different important places across the length and breadth of the country only to serve as 'guiding centres' to our farmers where they can learn the latest methods of cultivation, use of best and improved fertilizers, use of latest tools of cultivation and acquire latest technical know-how. Thus I feet that the State farms or the so called Public Sector in the agricultural field should serve only as guide, friend and philosopher, and in doing so we will also add to the agricultural production. But we should avoid doctrinaire expansion of public sector in the agricultural field.

Now let us turn our attention to some of the points regarding industrial sector. It is now common knowledge that along with a greater–emphasis on heavy industries, due accent is also to be given to agro–industries and cottage industries. These will certainly help establish a broader and dispersed industrial and technical base for our economy. We should be careful that in the interest of the growth of our economy, use of power and improved method and techniques should definitely be used wherever feasible. Moreover, we should also keep in mind that technically efficient small scale industries in new lines of production, which may serve as complementary to larger units as in Japan, should be countenanced and given an important place.

Thus we have done some critical reflection on agricultural and industrial sector and considered the priority issue as well. Once the decisions regarding to agriculture and industry are taken, the rest would follow, e. g., expenditure on transport, irrigation and power, etc., can be worked out in accordance with the needs of agriculture and industry.

Expansion of Employment Opportunities

The Third Plan can ill–afford to ignore the vital and pressing problem of unemployment as it has dangerous social and political implications with revolutionary fervour. A half–clad and half-fed man is a diseased man who infects the entire nation.

It is estimated that at the beginning of the Third Plan the backlog of unemployment would be to the tune of about 7 to 9 millions, in addition to this we would have to take into consideration the additional labour force during the Third Plan period. Thus the Third Plan comes face to face with the gigantic task of providing at least about 16 to 20 million jobs, if the unemployment is to be erased in toto. But is it possible ? Perhaps at best we may only be able to eradicate the additional unemployment and some of the backlog.

The unemployment problem exists in our country because of the failure of the economy to step up the rate of investment over and above that of population growth. It should be clearly recognised that employment is very much integral to and possesses a direct bearing on pro-

2. Yojana, April 5, 1959; R. Balkrishna: "There could be no doctrinaire objection to this policy as the addition of agriculture in the public sector is in line with the general pattern of planning in this couutry".

duction and as such "the employment approach under the Third Plan should be an economic approach rather than sentimental social justice approach."[3] Thus we have to create employment opportunities in the field of agricultural production and industrial production. In the context of agricultural sector, intensification and diversification of agricultural production plus breaking new land wherever possible will help increase employment opportunities. Simultaneously, this should be integrated with large expansion of agro-industries, cottage and small scale industries in rural areas. As our approach must be an 'economic approach', use of power and better techniques should be countenanced wherever possible to further the productivity of the industries. Other development programmes, e. g., transport, building construction, social services, etc., will also provide vast employment opportunities. From the long term aspect, basic and heavy industries as well as other large-sized industries will go a long way in developing an 'economic approach' to the creation of new employment opportunities.

Population Perspective

Large population increase throws up the most serious challenge to the under-developed cum developing economy of of India. To quote Gunnar Myrdal, "The rapid and accelerating population increases swallow up by far the larger part of all India's too small savings and capital formation in purely 'demographic investments' which do not contribute to raising the living levels of the masses and advancing the economy." He further adds, "This however, only stresses the urgency of spreading birth control as rapidly as possible because otherwise it is difficult to see any real hope for India in the longer future." [4]

Myrdal hits the right nail on the head when he further says, "I am nevertheless of the opinion that India is not moving with the speed and determination that the very dangerous population situation would motivate". [5]

Hence, the compulsion of the situation demands that we should take up the family planning publicity supported with corcrete and tangible steps in all seriousness with full vigour, punch, drive and determination. We should enlist the fullest co-operation of village panchayats. A net work of mobile family planning clinics should spring to action with all the paraphernalia consisting of clinical and surgical equipment, contraceptives for sale as well as suitable equipment for audo-visual instruction and printed leaflets in regional languages for free distribution in rural areas and small towns. To repeat the grim warning again *in the absenee of vigorous population policy we will be planning and moving only in a stagnant pool.*

Indian Socialism

Certainly socialism has become the accepted basis of Indian policy. It has come to stay in the country. There cannot be and should not be any going back, and those who talk in this vein simply want to put the clock of progress back. But in this context there are two very vital points, first the Government should make the contents of Indian socialism very clear in the Third Plan; and secondly, the Indian businessmen must develop a broader attitude to

3. Sunil Guha, in his article 'Third Plan Perspective' contributed in A.I.C.C. Economic Review, June 15, 1959, p. 12.

4. Gunnar Myrdal, in his article 'Indian Economic Planning' Contributed in United Asia November, 1958, p. 279.

5. Ibid, p. 280.

recognise the new progressive current of socialism.

First let us turn our search light on Indian capitalists and businessmen. They must clearly recognise and understand the hard fact that Socialism has taken its roots in India ; hence, they should come out of their set traditional mental groves to adjust themselves with the changed progressive conditions and should learn to swim with the new progressive current. It is really heartening to note that some of them are having the feel of the new change and are changing and adjusting. It really goes to their credit.

In addition to this attitudinal change on the part of the Indian industrialists, the Government owes a very great responsibility with regard to the clear exposition of Indian socialism, its meaning, content and significance. No doubt Government has made certain things quite clear and explicit regarding Indian Socialism. *First*, it has been clearly stated that Indian socialism is not totalitarian in its organisation, it is based on democratic principles, it values most human freedom and as much is quite different from the socialism of China or Russia. Not one but many passages can be quoted in support of this contention from Second Plan and other Government sources. *Secondly*, it has also been stated that Indian socialism is not doctrinaire in its approach. "The Socialist pattern of Society is not to be regarded as some fixed or rigid pattern. It is not rooted in any doctrine or dogma. Each country has to develop according to its own genius and traditions. Economic and social policy has to be shaped from time to time in the light of historical circumstances. It is neither necessary nor desirable that the economy should become a monolithic type or organisation offering little play for experimentation either to forms or as to modes of functioning. Nor should expansion of the public sector mean centralisation of decision-making and of exercise of authority."[6] Hence, thirdly, it has been stated that "The accent of the socialist pattern is on the attainment of positive goals; the raising of living standards, the enlargement of opportunities for all, the promotion of enterprise among the disadvantaged classes and the creation of a sense of partnership among all sections of the community. These positive goals provide the criteria for basic dicisions."[7]

Thus we see that Indian socialism is stated to be neither totalitarian in organisation nor doctrinaire in approach; and as such it lays more accent on the attainment of certain positive goals. Certainly these are vital points of democratic socialism of India.

But in this context the following points need close and serious attention :

1. In practice the Government by its actions and otherwise must prove it to the hilt that our socialism is not doctrinaire in approach. Government and the people must be cautious to this. I am constrained to make this statement as many a times government actions and the speeches of its spokesman create an impression that unconsciously we may drift to doctrinaire socialism.

2. In democratic socialism the private sector is imperative ; "it has a legitimate and a necesssary function to perform".[8] "The reason why a socialist economy requires a private sector is because socialists place a value on individual freedom. Their duty then is to ensure that freedom is in fact main-

6. Second Five-Year Plan, Final Draft (1956), p. 24.

7. Ibid, p. 24.

8. Socialist Union Twentieth Century Socialism (Penguin Special, 1956) p. 147.

tained within it—not crushed out of existence by the empire builders of the market." [9]

In other words, *the private sector has an important role to check the power of the State.* "The power of the State must have reasonable checks because that is the only guarantee of freedom and of a society that will develop and renew itself by the initiative and enterprise of the individual composing it. *The guarantee that Mr. Nehru will not use the economic power he seeks to vest in the State for his own egocentric ends. is not enough. Mr. Nehru is not going to succeed Mr. Nehru".* [10]

3. Once it is clearly understood that private sector is not going to be abolished and nobody has so far suggested that we, if we do so, will let ourself off from the moorings of democratic socialism —then it is imperative, just and fair that the Government should not always and continually paint the private sector as something working against accepted national aims and aspirations. The Government should not crib and cabin the private businessmen at every turn, otherwise it will break the impulse of industrialisation.

4. Thus the main and vital problem is that of proper check on economic power—whether it is in the hands of State or that of private sector. As a matter of fact entire economic power can neither be left with the public sector nor with the private sector. Hence, the presence of both the sectors is a desideratum—economic power of the State will be tempered by the private sector and the power of the Private Sector will be tempered by the Public Sector which will also canalise the private sector for the social ends instead of merely private ends.

5. "The socialist way of planning is by the direct participation of the government at the strategic points of the economy; in other words there must be a public sector through which to plan."[11]

"There is no virtue in public enterprise in itself, but it is essential if the government is to plan for economic security and an expanding economy. What is needed is not just more and more of any of these, but more to be used towards clearly defined aims. The first question is never 'how much' ? but 'what for ?

"Yet 'how much?' is the question that is constantly being asked. As if any one could tell in advance the precise mathematical proportion of the economy which must be publicly owned before socialism have arrived ! A doctor may as well foretell how many spoonfuls of medicine the patient must take before he is 'cured', or the teacher how many books his pupil must read before he is 'educated'. The question puts the cart before the horse. If socialists would stick to the real issue—'what for ?,— 'how much?' would take care of itself,"[12]

Educational approach

The Third Plan should give a high priority to a right educational approach. Expenditure on education should be regarded as a long-term national investment: if there are not the right type of trained personnel, the money invested in various schemes would be wasted. Educational policy is to be oriented according to the developing economy of our country. Shriman Narayan Agrawal had very aptly said—while agriculture was the basis of the Plan and heavy industries the core, *education was the soul of the Plan* (emphasis mine) with-

9. Ibid p. 148.

10. Hindustan Times, October 1, 1959, under the caption 'National Affairs' by S. M.

11. Socialist Union: op. cit. p. 148

12. Ibid, p. 149-50.

out which it would not be possible to build India on a sound foundation.[13]

Self-sustaining and Self-generating Economy

After the deliberations of the 00ty seminar, it is generally accepted that the Third Plan should aim for the realisation of a self-sustaining and self-generating economy; in other words we are to reach the stage of 'take-off'.

Dr. A. K. Das Gupta[14] gives three criteria for judging the situation of 'take-off' stage, viz. (1) growth of savings (2) growth of per capita income and (3) the growth of employment and unemployment. Dr. Das Gupta gives overriding importance to the third test.

But Rostov applies only one test of the growth of savings and as such puts, with certitude, India among economies "attempting take-off." Dr. Das Gupta feels that judging by this sole test India is surely well-up on the 'take-off' line; even leaving out foreign aid, the rate of savings and investment in our economy will have gone up under the two plans presumably from 5 percent to around 9 percent of the annual income.

The scope for savings has also widened, judged by the rise in the per capita income, which has gone up by about 18 percent over the period 1951-59. In this context there are uncertainties that still characterise production in the agricultural sector. But, Dr. Das Gupta adds that at the physical level the situation is encouraging if we go by the indices of production of strategic commodities such as iron and steel, cement, electricity etc.

Coming to the third test of employment Dr. Das Gupta adds that the situation is alarming. The backlog of unemployment on the eve of the Third Plan is supposed to come up to 7 millions, and the addition to the labour force consequent on the growth of population during the Third Plan period is estimated to be of the order of 14 millions. Hence, the Third Plan has to create a large number of employment opportunities, say at least double the number of the Second Plan; and, as Dr. Das Gupta further says, it is then, that our economy will get on to the 'take-off' stage in any significant sense. And if this is guaranteed, then employment has to have top priority among the objectives of the Third Five-Year Plan.

Mr. Paul Hoffman,[15] Managing Director of the United Nations' Special Fund, said in New Delhi on Friday, the 26th Feb., 1960—India was one of the 20 countries which would reach the take-off stage before 1970—from where they could make rapid industrial progress.

Mr. Hoffman prescribed two pre-requisites for reaching this stage—(1) under-developed peoples must realise that they alone could bring about the development of their country even though external aid was available. (2) Secondly, under-developed nations must set for themselves a minimum target of economic advancement at the rate of 2 percent a year, if they wanted to reach the take-off stage soon.

Mr. Hoffman further said—India could do it provided it had a band of honest and dedicated officials. Another thing that India would need was, what he called the "middle group of technicians" in thousands.

13. In his address on the occasion of a symposium on 'Planned Progress of India' organised by the Allahabad University on 21st December, 1958 in connection with its 70th anniversary, reported in Hindustan Times, dated 22nd, December, 1958.

14. Dr. A. K. Das Gupta: "Understanding Take-off" an article contributed in A. I. C. C. Economic Review, Banglore Session No., 1960, p. 30.

15. Mr. Hoffman spoke on "Inter-dependence—fact and opportunity" at a meeting held under the auspices of the Indian Council of World Affairs, reported in Times of India, 28th Feb. 1960.

Defence Needs

Chinese aggression has created a grim and difficult situation; "a great military power is streching out its arms and tightening its embrace along the Himalayan frontiers."

It is now generally accepted that nation's Defence strength is significantly dependent on its industrialisation and economic capacity and potential. Hence, our industrial programme should become consciously Defence-oriented so that the range and scale of defence production may be organised in consonance with the changed circumstances and not left on the narrow capacities of a limited number of ordinance factories and workshops, cluttered up and over worked.

In this context the following broad lines may be suggested for serious and close consideration for the Third Plan:

1. "Wasteful diversion of capacity into channels of civilian production or even the production of military supplies which industrial facilities in the private sector can make to Defence specifications should be stopped." [16]

Very aptly it is further added, "In the planning of new production facilities of the expansion of existing ones, it is obvious that private industry should be asked and enabled to co-operate. Defence production has been muffled in this country by the unnecessary, unreasonable and even absurd veil of privacy and secrecy thrown about it. Contrary to the practice of other democratic countries, the Defence Ministry here has strained security demands to the point of virtually shutting out participation by private industry in Defence production. Whereas in other countries it is common practice to develop strategic manufacturing facilities all over the industrial apparatus of the nation, here Defence production has been kept largely a Government monopoly. Obviously this policy of sequestration and confinement cannot answer to the needs of extensive military preparedness."[17]

2. The nation must enlarge and diversify its industrial base for meeting the defence needs. Hence, the necessary changes in the import policy especially regarding relaxation of import restrictions on capital goods.

3. A modern army must draw from the experience of all. India's army's training and organisation is to be based on the latest knowledge. This requires adequate co-operation from one of the major powers, especially America and other western countries. But this does not mean that we are to enter into military alliance. Keeping our non-alignment policy in tact, we can seek an adequate amount of military co-operation with regard to training of our officials and the supply of certain other latest military equipment from outside.

4. " On the whole, a programme of preparedness on the economic side need not interfere unduly with the broad course of economic development which the nation has in view. But there is a clear necessity for greater purposiveness in planning industrial production and expansion and for increased concentration on developing the basic and long-term economic strength of the nation."[18]

Size and Magnitude of the Third Plan

Few will disagree that the Third Plan should be bigger than the Second. The consensus of opinion regarding the size of the Third Plan is of the order of about Rs. 10,000 crores. The business commu-

16. Touchstone: 'The Sinews of Security' in the Hindustan Times, November 6, 1959.

17. Ibid

18. Ibid

nity, through the Federation of Indian Chambers of Commerce and Industry, also puts its seal of approval on this figure, though the Indian Merchants' Chamber, Bombay disagress with this figure and likes to put it on a lower plane to the tune of about Rs. 8,500 crores. But generally, and rightly so, a figure near about Rs. 10,000 crores is agreed upon.

Certainly while deciding the size of the Third Plan we should have to fasten our attention on the following two points:

1. Our needs and aspirations, to put it differently, the objectives of the Third Plan.

2. Our financial resources.

No doubt our needs, aspirations and objectives of the Third Plan speak out clearly and forcefully that the size of the Third Plan must be much bigger compared to the Second Plan. The process of economic development initiated by the First Plan and given a certain momentum by the Second, is to be carried forward still vigorously if we want to lift our country out of the morass of poverty. This is the logic of perspective planning. Again, a very serious cognisance is to be taken of the fact that our population is growing fast at a tremendous rate of 2 percent per annum. Now besides these long term perspective, attention is to be turned on the immediate problem of unemployment. At the beginning of the Third Plan the backlog of unemployment is estimated to be about 7 million, and to this new labour force during the period of the Third Plan is also to be added. Our population is existing on the starvation level. Then we have to see that we are not lagged far behind in the race of economic development in which the rest of the world (and especially China in Asia) is plunged headlong. Now these are compulsions of the situation which point to the logical conclusion that the size of the Third Plan must be appreciably bigger than the second.

But simultaneously our judgement and decision regarding the size of the Third Plan must be informed by the realism of our financial resources. In other words, our judgement based on our needs must be tempered by the State and potentiality of our financial resources. Really speaking the Third Plan of the magnitude of Rs. 10,000 crores is not beyond us. While comparing with the Second Plan, we should take the figure of Rs. 7,200 crores and not Rs. 4800 crores (later revised downwards to Rs. 4500 crores and now again revised to Rs. 4600 crores in the present budget) and as such we note that the Third Plan is not very big and resources, both internal and external, can be mobilised to fulfil Rs 10,000 crores plan. But there is no denying the fact that this amount will strain all our resources and need stupendous efforts and austerity on our part.

A most vital point in this context is allocation of the said figure between Public and Private sector. I have made extremely clear that in democratic socialism the later has a very important as well as a legitimate role to play. Hence, private sector should be rallied with appreciable responsibility in the fascinating drama of India's economic development, and should be countenanced with necessary facilities and inducement, in concrete terms it must be allotted at least Rs. 4000 crores out of Rs. 10,000 crores. To quote B. K. Madan, "The Second Plan might end up with an order of private sector investment of at least Rs. 3000 crores, as against the projected Rs. 2400 crores, and perhaps more...... a target for the Third Plan of private sector investment

at Rs. 4000 crores should be within the realm of feasibility."[19]

Financial Resources

The real rub lies with regard to financial resources. They are to be assessed with great care and realism. "A neglect of the realistic assessment of the resources in preference to basing the Plan on needs would inevitably lead to failure."[20] This realism demands that we have to strike a balance between our need-based plan and finance-resources-based plan; and in this light, it is generally agreed, the size of the Third Plan is to be kept about Rs. 10,000 crores.

Let us first come to the ticklish question of taxation. Broadly, a majority of us agrees that there is not much scope for direct taxes regarding an increase in their rates and imposition of new taxes. In this context we should be careful that in the flush of our enthusiasm we should not go to the point of breaking the impulse in industrialisation in the private sector. Even in agricultural sector there are definite political limits in this context. Direct taxes will give us only marginal increments. Hence, we are left with indirect taxes, say, excise duties, sales tax etc. Here it is suggested that the net should be broadened with respect to the range and the rates of these taxes. Generally the total figure talked of from the source of taxation is Rs. 2000 crores. This estimate includes revenue from additional taxes plus additions owing to increased national production and income. In addition to these, we should be very careful not to fritter away the additional resources on non-development expenditure. In collaboration with our present tax structure, a strict policy towards tax-evasion will also add to our revenue. Again, marginal increases in the direct taxes, say, land revenue etc. will also help. All these things may even raise the figure of Rs. 2000 crores to Rs. 2400 crores. Thus the tax efforts during the Third Plan need not shudder us.

Now we come to loans and savings. It is generally estimated that during the Third Plan the combined figure under this head may come about Rs. 1500 crores, provided vigorous and honest efforts are taken to mobilise the savings including rural savings. A scheme of compulsory insurance has also been suggested from certain quarters.

Railways will yield greater surplus as compared to the figure in the Second Plan. It is the view of the informed circle that we may hope for about Rs. 500 crores as surplus from Railways. The yield from Provident Fund and other deposits is estimated to be more than Rs. 250 crores. Thus the total under these heads may be put roughly about Rs. 800 crores, giving an increase of about Rs. 400 crores under these heads over the Second Plan.

Now it is widely held that various State or Public enterprises (in addition to railways) should also earn profits which must be ploughed back for planing and expansion in the public sector. The old guiding principle of 'No loss, no profit' for public enterprises has been exploded to the point of being obsolete. The Taxation Enquiry Commission also supports this view in the remarks—"In certain cases where the State has made substantial investment, a policy of regulating prices so as to secure an adequate return on the capital invested is not only unobjectionable but indeed be desirable." Again we find the same idea in the Second Plan Report in these remarks: "that taxation has its limits and this

19. B. K. Madan: 'The Third Plan' an article contributed in R. B. Of India Bulletin, July 1959.

20. M. H. Gopal: Yojna, May 17, 1959.

means in turn that it has to be supplemented by institutional arrangements which bring directly into the public exchequer, the surplus which accrue from the sale and services to the public. It is through devices of this type through appropriate pricing policies in respect of the products of public enterprises or through State trading or fiscal monopolies in selected lines that some of the under-developed countries with levels of living not much higher than those in India are raising the resources required for their development effort." Prof. Galbraith has suggested the establishment of a Public Sector Development Bank for financing public sector industries. It has been guessed that during the period of the Third Plan about Rs. 500 crores to 700 crores may be obtained from this source. In addition to this source, State trading is also supposed to yield about Rs. 500 crores during the Plan period.

Now we come to foreign aid. The foreign exchange component of the Third Plan is generally estimated to be about Rs 2000 to 2500 crores, including repayment liabilities estimated to be about Rs 500 crores during the Third Plan period. It is generally felt that foreign loans and grants etc. to this extent are not easy to acquire. Again foreign loans have definite political and economic limits which are also not to be forgotten, All these point to the logical conclusion that the Third Plan must plan on a steadily increasing export surplus. Again, howsoever, our foreign friends may be generous to us and inspite of favourable climate in foreign countries we should not and cannot expect to have sufficient loans to meet the whole of our needs. Hence, it has been mooted that during the Third Plan we should endeavour for an export surplus of the tune of Rs. 500 to Rs. 1000 crores during the plan period in order that we may meet our total foreign exchange requirements.

Some of the above estimates seem to be quite liberal. Hence, the gap will have to be covered by resorting to deficit financing. But here the general consensus of opinion is that it should be on a modest scale in the context of prevailing inflationary trends to safeguard from runaway inflation. Some of us feel that we may resort to this device to the tune of Rs. 900 to Rs. 1000 crores during the total period of the Plan. But during this period we should not and cannot be rigid about it because its extent will depend upon the state of internal production of goods and commodities and their price level.

Labour mobilisation for capital formation is also suggested; proper staggering of schemes, suitable atmosphere and proper incentives etc. are needed in this context.

It is also suggested from some quarters that we should get productive use of idle huge gold hoards and religious endowments. No doubt these proposals will raise and meet tremendous controversy as well as resistance. But in the first instance the idea of gold bonds must receive a serious and deep probe by the experts and if possible only a modest beginning may be made.

Organisational Aspect—technique of formulation and execution of the Plan

Organisational aspect is the kingpin of planned efforts. In the formulation and execution of the Third Plan this must be given full and vigorous recognition; planning is not merely the function of financial resources but that of organisation as well and perhaps more important than the former. Experience throws floodlight on this crucial aspect that our planning has been defective both in its formulation and its execution.

It is now common place that planning should be from below, and we did hear

a lot of talk about this at the time of formulation of the Second Plan. But this was not done to the desired extent. As a matter of fact "Our planning has proceeded from projects to people instead of from people to projects."

But planning from below requires a well planned system. Dr. P. C. Bansal[21] has suggested, "the central planning body should have its branches in the States and important centres having a population of 20,000 or so. The community blocks can be made centres for this purpose. The representatives of the central Planning body should remain in these centres. These representatives must have the power to collect all the required information on all needs of the area[22]. The centre through its planning departments in the States should keep them informed of its scheme. Thus a two-way traffic in collecting information of the needs of the units and also co-ordinating the figures required by the Centre may be maintained. On this information the Centre can plan operative targets which can be achieved effectively."

Regarding the execution Dr. Bansal's remarks are also pertinent: "The executive branches should also be set up parallel to the planning branches and between the two complete co-operation and collaboration should be maintained."

No doubt the above pattern should seek full and active co-operation of such local bodies as panchayats and co-operative societies. As a matter of fact planning, formulation and execution are all complex matters and, hence, cannot and should not be entirely left to local bodies immediately, though their active support and co-operation is vital. But certainly after the working of few years and in the light of experience gained a major part of formulation and execution may be entrusted to local bodies with different departments of government merely acting as guiding lights to them.

Next we must streamline our administrative machinery in consonace with the changed context of planned development, the administrators must change their 'collar and tie' habits; "administration appears to be the key stone of the arch of the Third Plan"[23] To be brief, on the one hand our machinery must be efficient and responsible, and on the other hand it should be co-operative and responsive.

There is one more vital but controversial point regarding *expansion versus consolidation.* There is one school of thought which declares emphatically that we should not have a bigger Third Plan but instead we should consolidate our steps and achievements. There is another school of thought which puts forward that to relax and soft-paddle in order to consolidate will be suicidal. "Really speaking the truth must lie somewhere between and betwixt the warnings of the consolidators and the exhortations of the expansionists. If the former seek to employ their arguments as a dissuasion against planning, they would be sadly misjudging both the temper of the times and the challenge of the resolution of rising expectations in which our people are now caught. The latter for their part should not let enthusiasm for ambitious planning blind them to the harsh realities of actual achievements.

"Consolidation is not the enemy of progress nor even a drag on expansion.

21. Dr. P. C. Bansal in his paper on 'The approach to the Third Plan', submitted for the forty-second Annual Economic Conference held at Annamalainagar.

22. "The collection of vital data at the village level can be entrusted to village panchayats."

23. B. R. Bhagat, Deputy Minister of Finance, in his article "Administrative Tasks of the Third Plan-I" contributed in the Hindustan Times, Dated October 22, 1959.

On the contrary it is the basis and the spring-board for stable and sound advancement .... The argument for consolidation is not entirely an argument for conservative planning, but the advocacy of good and careful planning ...... The great danger about expansion is that it may be exploited to cover the sins of shoddy planning and sloppy implementation."[24] Hence expansion must be tempered with at least at key points with consolidation, in other words both should move together. "A forward-looking approach need not mean turning a blind eye to things under one's nose"[25]

Conclusion

It has become common knowledge that public co-operation is the 'fuel and petrol' of economic planning, hence it is to be enlisted vigorously. Any amount of striving is most certainly likely to shipwreck and flounder on the rock of public apathy and non-co-operation. The implementation of projects and schemes is not merely a question of resources or technical personnel but "it is more the attitude of mind, the emotional fervour, the warmth of conviction, a sense of values, a feeling of moral obligation to participate in schemes of collective well-being which plays the decisive role and constitutes the difference between success and failure."[26]

But the vital point is how to move this machinery of public co-operation on top speed ? This mostly depends upon our leaders and Govt. officials. "We wish to emphasise that the masses of the people take their cue from those who are in authority over them. If the leaders are reactionary, selfish and corrupt, the massess in turn are dispirited and seem to lack initiative. But if the leaders win the confidence of the country, and prove themselves to be vigorous in eradicating privileges and gross inequalities, they can inspire the masses with an enthusiasm for progress which carries all before it." [27] Hence to keep moving with top speed the machinery of public co-operation we need a band of honest and dedicated leaders and officials. Again the Plan should be taken as a national plan and not relating to any party.

To put the entire situation in nutshell—on the one hand, The Third Plan must *fix* its feet well on the terra-firma of past experience, present conditions, future needs of continuous economic development, careful expansion tempered by stabilisation and consolidation; on the other hand, the Plan, the People, the Administrative machinery and the various Institutions must move together with speed and caution to ensure sure success of the Plan.

24. Editorial in the Hindustan Times January 7th, 1960, under the caption 'Not Contrary.'

25. M. L. Dantwala : The 'Organisational' Approach to the Third Five-Year Plan' an article contributed in A.I.C.C. Economic Review, March 15, 1959.

26. Sadiq Ali : Current Thinking on the Third Plan' in A.I.C.C. Economic Review, April 15, 1959.

27. U. N. O. Report on Measures for the Economic Development of Under-developed Countries.

BENEFITS OF IRRIGATION FOR WHEAT CULTIVATION IN PUNJAB

By : J. N. SHARMA

'INDIAN agriculture is a gamble in monsoons.' The statement has been repeated so often that it has practically lost its meaning. It is well-nigh forgotten that the statement epitomizes the perilous nature of Indian farmers' dependence on monsoons. The spectacle of Indian farmer looking at the sky on the eve of the onset of rainy season presents a picture of his abject dependence on rainfall. Irrigation facilities are absolutely essential if Indian agriculture is to be insured against the vagaries of weather. Irrigation is, however, not merely a form of insurance against droughts, it is also necessary for raising agricultural productivity.

While benefits of irrigation in vague terms are obvious to everyone, no attempt at precise measurement has so far been made. It is self-evident that the gain from irrigation will vary from crop to crop and from region to region. Moreover, the gain to the individual farmer will not be the same as the gain to the community as a whole.

An attempt has been made in this note to make an objective appraisal of the effects of irrigation in respect of wheat cultivation in Amritsar and Ferozepur districts of Puujab on the basis of data contained in the Report on the Studies in Farm Managemet in Punjab for the yeas 1954–55. As the data relate to a paticular year and a particular region it is not safe to draw inference for universal application. There is an additional limitation that the survey was not designed particularly with a view to study the benefits of irrigation.

The following table gives comparative data on certain items on the basis of cost accounting sample :

Table : A

S. No.	Item	Unit	Amritsar Irri-gated	Amritsar Unirri-gated	Ferozepur Irri-gated	Ferozepur Uuirri-gated	Region Irri-gated	Region Unirri-gated
1	2	3	4	5	6	7	8	9
I	Gross Income	Rupees per acre	145	119*	188	45	170	64
II	Expenditure	Rupees per acre	150	94	176	68	165	73
III	Profit (+) or Loss (–)	– do –	– 5	25*	12	– 23	5	– 9
IV	Cost of Production	Rupees per maund	10.8	9.9	10.1	14.7	10.3	13.1
V	Yield	Maunds per acre	11.16	9.4	14.16	3.5	13.5	4.3

* It was ascertained that the figure of Rs. 149 given in the report was due to printing error, corresponding figure of profit is also corrected.

In this table gross income is the value of the total outturn including the by-product; expenditure is the total cost of production including not merely the out-of-pocket expenditure but also the rental value of owned land, interest on owned capital and imputed value of family labour; profit or loss is the gross income minus expenditure; cost of production is the weighed average cost with output as the weights; and the yield per acre is the weighted average yield with area as the weights.

It is interesting to note that in Amritsar district, irrigation gives negative results. Even though the yield per acre of wheat on irrigated land is higher than that on unirrigated land, yet the cost of production per maund is higher. Additional expenditure per acre on irrigated land as compared to that on unirrigated land is Rs. 56 but the additional income per acre is only Rs. 26. The net outcome, therefore, is that the farmer suffers a loss of Rs. 5 per acre on irrigated land as compared to a profit of Rs. 25 per acre on unirrigated land.

The negative results in Amritsar appear to be abnormal phenomena. Three possible reasons may be adduced in explanation. Firstly, weather conditions peculiar to the year 1954-55 seem to be partly responsible. Total rainfall in Amritsar district during 1954-55 was 27.07 inches as compared to an annual average of 22.31 inches during the five years, 1950-51 to 1954-55. The total rainfall during 1954-55 was quite well distributed over the year. Relatively good rainfall and its even distribution during 1954-55 are likely to have reduced the need for irrigation and thus rendered irrigation uneconomic.

Secondly, relatively high degree of yearly average rainfall in Amritsar district seems to account for the negative results to some extent. Average annual rainfall in Amritsar district during the five-year period, 1950-51 to 1954-55, was 22.31 inches as compared to 16.96 inches in Ferozepur district. During the same quinquennium the spread of rainfall over number of days was 30.8 days in Amritsar district as compared to 22.2 days in Ferozepur district. Thus it is not merely that average yearly rainfall in Amritsar district is more but also that there are more rainy days in a year than in Ferozepur district. That tends to reduce the profitability of irrigation.

Thirdly, there was only a small number of holdings growing wheat on unirrigated land. Holdings selected for investigation were, therefore, too few to be representative of the "universe". If number of units investigated is too small, peculiarities of individual holdings are not averaged out. This limitation is particularly pertinent to agriculture because of wide differences of soil from holding to holding. In the present case, holdings investigated for unirrigated land might have been particularly good in respect of soil fertility etc., as compared to the holdings with irrigation.

The effect of the three factors is manifested in the relatively high yield per acre on unirrigated land in Amritsar district. It is 9.4 maunds as against only 3.5 maunds in Ferozepur district and 4.3 maunds in the region as a whole.

The above mentioned factors invalidate the results obtained in Amritsar district. No generalisations can be made on the basis of these results. Findings relating to Amritsar district are only useful in that they indicate that the popular belief that irrigation is profitable anywhere and for every crop is not strictly in conformity with facts. There can be exceptions where, as in case of wheat cultivation in Amritsar district, despite increase in physical yield the

additional return may fall short of additional cost.

In Ferozepur district, irrigation has made an appreciable contribution towards the increase in the total outturn per acre from wheat cultivation. Additional income per acre from irrigated land as compared to unirrigated land is higher than the additional expenditure per acre. The farmer realises a profit of Rs. 12 per acre on irrigated land as compared to a loss of Rs. 23 per acre on unirrigated land. Yield per acre on irrigated land is substantially higher than that on unirrigated land. The cost of production per maund on irrigated land is appreciably lower than that on unirrigated lands. Thus in all respects irrigation gives positive results in Ferozepur district. Both profit and the yield per acre shows a rise but cost of production a fall in consequence of irrigation.

In the region as a whole also irrigation gives positive results but the extent of benefit conferred is lower than in Ferozepur district, because a part of the gain in Ferozepur district is offset by loss in Amritsar district. The farmer reaps a profit of Rs. 5 per acre on irrigated land as against a loss of Rs. 9 per acre on unirrigated land. Irrigated land gives higher yield per acre and lower cost of production per maund than unirrigated land.

In studying the benefits of irrigation in respect of wheat cultivation in Punjab, it seems better to study the region as a whole rather than the two districts of Amritsar and Ferozepur separately. Study of averages for the region as a whole will give a better idea of the extent of gain conferred by irrigation in respect of wheat cultivation in the soil-climate complex characterising this region. It may be assumed that peculiarities of each of the two districts and pertaining to the year 1954-55 will average out. This assumption will not completely conform to facts but it is a necessary simplifying assumption.

It has already been observed that the gain from irrigation to the community as a whole will not be the same as the gain to the individual farmer. A rough idea of the extent of benefit conferred by irrigation from the point of view of the individual farmer in respect of wheat cultivation may be had from the difference made to the profit or loss per acre as shown in table A. For the region as a whole the gain from irrigation comes to Rs. 14 per acre. It is obtained by deducting additional expenditure per acre on irrigated land as compared to unirrigated land from the additional gross income per acre from irrigated land as compared to unirrigated land.

The addition to the profit (or diminution from loss per acre) will not be the exact measure of the gain from irrigation except on the basis of two assumptions. The first assumption is that the additional return from the additional use of other factor-inputs applied simultaneously with the application of water is equal to the additional expenditure incurred on them, or their imputed values. The second assumption is that the imputed value of additional family labour expended is equal to the disutility of the additional family labour applied. The second assumption relates to the nature of the supply curve of family labour for agricultural operations. We shall presently examine both these assumptions.

To examine the first assumption it is necessary to look into the break-up of the cost of production in two cases, i.e. irrigated land and unirrigated land.

Table : B

Break-up of total cost of cultivation in the Region.

(Rupees per acre)

Sl. No.	Items of Expenditure	Irrigated	Unirrigated
1.	Human Labour	38	15
2.	Bullock Labour	41	11
3.	Seeds	10	7
4.	Manures and Fertilizers	3	...
5.	Depreciation on Implements and Machinery	7	2
6.	Interest on fixed Capital	2	1
7.	Land Revenue	2	2
8.	Rent and Rental Value of Land	54	25
9.	Artisans and Miscellaneous	2	1
10.	Irrigation Charges	6	...
	Total..	165	64

It is observed that application of factor resources serialled 1,2,5,6, and 9 on unirrigated land, in case of holdings investigated, is already pushed to the point that any additional application of these factor resources will not add to the profit (or substract from the loss) per acre from the unirrigated land. On the contrary it may diminish the profit per acre (or increase the loss per acre) as the additional expenditure may exceed the additional receipts. In case of these factor resources, therefore, it is a perfectly valid procedure to deduct the additional expenditure incurred on the additional doses of these factor-resources from the total additional receipts (gross income) to obtain the additional return from irrigation alone. As regards items of expenditure serialled 7 and 8, these items of expenditure do not correspond to any factor inputs. Any additional expenditure on these items does not add to the total gross incomes. In case of these items of expenditure also, the same procedure can, therefore, be applied to obtain the additional return from irrigation alone accruing to the individual farmer.

It is items of expenditure serialled 3 and 4, that is expenditure on seeds and manures and fertilisers, only in respect of which the above procedure is not strictly permissible. In the present case, Rs. 13 per acre are expended on these two items on irrigated land as against Rs. 7 per acre on unirrigated land. In so far as item No. 4 is concerned, it is quite likely that application of fertilisers on unirrigated land will diminish profit (or increase loss) per acre as the addition to gross income may fall short of the addition to the total expenditure. Application of farmyard manure or green manure on unirrigated land will, however, most probably add to the profit (or substract from the loss) per acre. Thus, the net effect of application of Rs. 3 worth of additional manures and fertilisers per acre on the irrigated land to the profit (or loss) per acre may be assumed to be nil.

As regards item No. 3, i. e. expenditure n seeds, it is probable that additional expenditure on seeds will make net addition to profit (or diminution from loss) per acre. It is so because an additional expenditure will enable the farmer to buy seeds of better quality which will give better yield per acre. Though it is likely, yet it is by no means certain, that additional expenditure per acre on seeds on unirrigated land will bring forth the larger return because certain high yielding varieties are suited to irrigated land only. In any case whatever the net outcome of additional expenditure on seeds, it will not be materially important to the results in the present case as the difference between expenditures on seed on irrigated and unirrigated land is only Rs. 3 per acre

which belongs to the second order of smalls.

The above discussion points out that it will not be too arbitrary to make the first assumption.

The second assumption is with regard to the equality of the total imputed value of additional family labour applied to its total disutility. This assumption can be stated thus, the imputed value per unit of family labour is equal to the marginal disutility of the family labour applied on unirrigated land. If the imputed value per unit is higher than the marginal disutility, as it is generally believed to be, additional supply of family labour will be forthcoming until the point at which the imputed value per unit and marginal disutility are equal.

In non-technical language the position of higher imputed value per unit than the marginal disutility implies that the farmers will welcome more opportunities of work even if the return per unit of additional man-hour of labour put in is lower than the current income per unit of man-hour of work. It is generally believed that in most cases family labour resources are so much underutilised that cultivators will readily expend additional labour if it makes even a small addition to the income of the family (not the profit in the sense in which it is used in this note). It is, however, not possibe to say what minimum addition to the family income is necessary to induce the farmer to put in an additional man-hour of labour. It will depend primarily on the economic condition of the family.

The question pertinent to the problem under discussion is: What difference will it make to the results of the present study if this assumption is removed to approach nearer to the actual conditions? To answer this question it is essential to know what is the number of man-labour days of family labour applied on one acre in each of the cases, namely, irrigated land and unirrigated land. The amounts of family labour put in are equivalent of 25.1 man-labour days per acre on irrigated land and only 5.19 man-Iabour days per acre on unirrigated land. Thus the additional family labour expended on one acre of irrigated land as compared to that expended on one acre of unirrigated land was 19.2 man-labour days. If the disutility of labour-unit to the farmer is less than the imputed value assumed in calculating additional expenditure, the total real cost of the additional labour to the farmer will be correspondingly less than the additional imputed value.

In such a situation, as described above, difference between family incomes (i.e. profit plus wages for family labour) per acre in two cases, i.e. on irrigated land and unirrigated land, will give a better idea of the gain per acre from irrigation. That will include gain on account of rise in physical productivity as well as gain on account of additional employment. For the region as a whole, the family income per acre on irrigated land is Rs. 38 and on unirrigated land Rs. 3. Thus irrigation has resulted in additional family income of Rs. 35 per acre.

The entire addition to the family incoms will obviously not be the net gain from irrigation. It will include the real cost of additional family labour. As has already been said the real cost is related to the 'disutility' of the additional family labour expended. It is, obviously, impossible to measure the real cost as it is purely psychic and relates to mind of the farmer. We may, however, assume that the real cost is equal to the amount of additional family income that will induce the farmer to put in the required amount of additional labour. That also will differ according

to the economic condition of the farmer, as we have pointed out earlier. It is fair to assume that in the condition prevalent in the region, the farmer will be ready to expend the required additional labour if he gets in return (say) 75 nP. per man-labour day. Then Rs. 14.4 will be the real cost of 19.2 man-labour days of additional labour applied for acre. The total net gain per acre from irrigation to the individual farmer will be additional family income minus the additional real cost i. e. Rs. 35—Rs. 14.4 = Rs. 20.6.

It comprises two elements, namely additional profit and gain from additional employment. As the additional profit per acre is Rs. 14, the benefit from Additional employment (in terms of excess of additional income over additional disutility from additional labour) is Rs. 6.6 per acre.

The total gain per acre from irrigation, to the individual farmer, will not be merely the additional return from wheat cultivation. It is a matter of common knowledge that with availability of irrigation intensity of cropping rises. The land on which it is possible to grow only wheat crop during the year in the absence of irrigation facilities may become fit for double cropping if water is available for irrigation. It may be possible to grow another minor crop during one year or it may be possible to grow three crops during two years. The additional return per acre from the rise in the intensity of cropping has to be added to the additional return per acre from wheat cultivation to obtain the total additional return per acre accruing from irrigation. Unlike the latter, however, it is not possible to find an exact figure for the former as it will depend on the extra crop grown. It may be assumed that gain from the increase in the intensity of cropping may be roughly 50 percent of the total net gain from wheat cultivation. On this assumption the gain from increase in the intensity of cropping will be Rs. 10.3 per acre.

The above discussion may now be summed up as follows :—The gain per acre from irrigation to the individual farmer comprises of the following three elements :—

i) Additional profit resulting from a rise in physical yield higher than the rise in expenditure Rs. 14

ii) Additional benefit accruing from additional employment i. e. excess of additional income over the real cost of additional family labour expended Rs. 6.6

iii) Additional return from a rise in the intensity of cropping Rs. 10.3

Thus the total gain per acre to the individual farmer from irrigation comes to Rs. 30.9 or Rs. 31.

It is evident that the gain from irrigation to the community will not be the same as the gain to the individual farmer. As stated above one of the elements in the yield per acre from irrigation from the point of view of the individual farmer is the additional profit per acre. The profit has been defined as the excess of gross income over expenditure. The rise in the rent and rental value of land necessitates addditional expenditure on the part of the individual farmer but it involves no additional cost to the community. It is merely a transfer payment. Thus, from the point of view of the community, the additional expenditure on this account must be added to the additional profit per acre accruing to the individual farmer to obtain the additional profit per acre from the point of view of the community. The rent and rental value of land has shown a rise of Rs. 29 per acre in consequence of availability of irrigation (vide table B). The additional

profit per acre from the point of view of the community will therefore be Rs. 43 per acre as against Rs. 14 per acre from the point of view of the individual farmer.

The gain to the community from irrigation on account of additional opportunities of employment and a rise in the intensity of cropping will be the same as the gain to the individual. The total gain per acre to the community from irrigation will thus be as follows :

(i)	Additional profit	Rs. 43
(ii)	Gain from additional employment	Rs. 6.6
(iii)	Gain from rise in the intensity of cropping	Rs. 10.3
	Total gain...	Rs. 60 approx.

It needs hardly be pointed out that despite all the appearance of neat calculations both from the point of view of the individual farmer and from the point of view of the community as a whole the figures of gain per acre are far from accurate estimates. The figures give only an idea of the orders of magnitude rather than any precise estimate of the gains from irrigation to the individual farmer and to the community. Certain limitations of the analysis have been pointed out in the very beginning of this note. Much more detailed information than is available at present is needed to arrive at a tolerably precise estimate for formulation of any policy measures in this sphere. While the figures of gain from irrigation arrived at in this note are far from precises estimates, certain broad conclusions emerge from the present study. The important conclusions from the point of view of practical policy are stated below:—

The study of the data pertaining to Amritsar district reveals that irrigation is not profitable under all conditions. It is well known that water requirements of different crops vary. Besides water requirements of the same crop also vary in different areas owing to differences in soil and climate. Intensive research is, therefore, called for to determine optimum requirements of water of each crop in different regions. Optimum requirements of water of a particular crop in a particular region will depend upon soil, and climate of the region. Moreover, the optimum requirement will also be influenced by the quantity and quality of fertilisers used. These are only some of the inportant and well known factors on which optimum crop requirement of water depends. Evidently a very thorough research is a necessary prerequisite of determination of optimum requirements of water of different crops in different regions.

The results of the type of detailed research recommended above will obviously be available after a fairly long period. In the meanwhile it is possible to form some rough idea of the optimum requirements of water of different crops and different regions. The water supply should be so distributed as to prevent as far as possible any excessive use of water. Application of water in excess of the optimum requirement will lead not merely to wastage of water, it may also result in the diminution of yield per acre.

A corollary which flows from the above point is that efforts should mainly be directed to supply water to areas where rainfall is scanty and the type of soil such as requires more water.

2. Concerted efforts have to be made to induce the farmers to adopt agricultural practices suited to wet farming. Application of certain factor-inputs like fertilisers and manures and improved seeds is very essential to obtain maximum results from irrigation. Adoption of a suitable cropping pattern is also necessary

to secure maximum benefit from the increase in intensity of cropping in consequence of the introduction of irrigation.

The break-up of the expenditures per acre on irrigated and unirrigated lands as given in table B reveals that even though the total additional expenditure per acre on irrigated land as compared to unirrigated land is Rs. 101 the additional expenditure per acre on fertilisers and manures and seeds is only Rs. 6. It shows that the farmers either find it difficult to find the means to procure required amount of fertilisers and manures and improved seeds or not are aware of the imperative need to apply these factor-inputs to derive maximum benefits from irrigation. While the latter reason may be partly responsible, the former seems to be primarily responsible for his failure to apply these perquisities to the optimum extent. It reinforces the oft-repeated argument in favour of indispensability of a suitable credit structure to make available to the farmers adequate credit on economic rates and expeditiously. Besides, it is necessary to launch a propaganda drive to educate the farmers in better farming practices.

3. It is also revealed by the break-up of expenditures per acre on irrigated and unirrigated lands that Rs. 29 or nearly 29 percent of the aggregate additional expenditure per acre on irrigated land as compared to unirrigated land was in respect of rent or rental value of land. It points to the need for effective control of rents and to the scope for imposition betterment levy to cover atleast a part of the cost of irrigation projects.

VEGETABLE GROWING

By: H. M. DESAI

(*Continued from Previous Issue*)

A. Traditional Methods :—On general considerations of these for garden cultivation include the following :—

Preparatory tillage operations i. e. ploughing the land by an indegenous or recently introduced iron ploughs. For garden cultivation the depth of cultivation to 6–7 inches is aimed at. By an indigenous plough about 5 inches of depth is secured by repeated operations. An iron plough does this in a single operation but needs more pairs of bullocks to work this implement. After ploughing the land is evened out by working blade harrows. These harrows break ordinary clods and even the surface. For removing weeds this implement has no equal. Broach type of harrow with curved blade is the most efficient of the harrows in use and is getting popular in other parts. In the lighter soils of Gujarat, land is prepared by repeated ploughings each of which is followed by a Samar (leveller).

The aim of preparatory tillage is to prepare seed bed, neither too loose nor compact; to a reasonable depth of granular structure, i. e., neither cloddy nor too loose and free from weed growth.

Manuring :—Usually 10 to 15 cartloads of well rotted farm yard manure or well prepared compost is added at the time, the preparatory tillage operations are in progress. This manure is not available in quantities required and is very costly. In any case the basic dose of this type of organic manure is considered necessary by farmers who try to satisfy the minimum need by reducing the dose to 7 to 8 cart-loads. The dificiency is made up by the use of other manures like oil cakes, sulphate ammonia, superphosphats etc. Whenever possible green manuring of san

crop is practiced but use of this to replace or supplement the basic dose has not extended due to various practical difficulties. Composting of village and farm refuse is being popularised. The aim of manuring land with this organic manure is to keep it in good heart so that soil may remain in granular form, can absorb and retain water, increase supply of plant food material and encourage growth of soil bacteria which is so essential to keep soil in good productive form.

Seed and Seed varieties :—Vegetable growers keep their own seed of indigenous varieties. The seeds of Cabbage, Knolkhol, cauliflower, beet, potatoes etc. which are of foreign varieties are purchased from merchants dealing in these seeds. Of late attempts are made to grow seeds of these crops at higher altitudes in Himalayan areas. Seed business is not controlled by the State in the sense it is done in foreign countries. There is no rigid inspection of seeds. There are seeds-men of repute who sell reliable genuine seeds. But the seed trade in general is not well organised nor controlled efficiently. Reliable seeds are available on Government farms but this source supplies vegetable seeds only in a very small quantity.

Sowing of seeds, dibbling planting etc: Some of the vegetable crops are raised in the monsoon season on rains and seeds of these crops are sown with a country seed drill. The operation of sowing seeds with a drill is a fine art. The quality of sowing, that is, seed rate, eveness in sowing etc. depends upon the hand of the sower. Straight and even sowing avoids over-crowding of seeds and facilitates after-Tillage-operations. Some of the crops like cucurbits, bean varieties etc. require dibbling of seeds at 5, 8, 10 or 12 feet distances.

Some of the tubers, corn and crops like potatoes, suran, ginger, alu etc. a plant part known as a set with an eye bud are planted at required distances.

Most of the vegetable crops like brinjals, tomatoes, cabbage, cowliflower etc. are raised by planting seedlings which are raised in the seed bed area from seeds which are usually small and delicate requiring lot of care in the initial stage.

Seed bed Area :—For raising seedlings in the seed bed area land on higher level is selected which is thoroughly cultivated and suitably manured by mixing Farm-Yard manure or Compost in the soil. Land is then laid out in beds of suitable size and seeds sown in lines or broad-casted; watering is given as required and beds are kept clean by weeding. If there is insect attack it is either hand picked, dusted or sprayed as required. In majority of cases the control measures against either pests or disease are either neglected or not attended to in time. As a result a lot of damage is done to seedlings in the seed-bed area by pests and diseases. When seedlings put forth 4 to 6 leaves or are about 4 to 5 inches in height or are about 3 to 4 weeks old they are considered fit for transplanting in the main area. Usually progressive farmers sort out good healthy seedlings for planting. Seed bed area before taking out seedlings is watered to make the area soft for lifting these.

Field Area :—The main field where seeds are sown dibbl' or seedlings are transplanted is prepar d as stated above by ploughing, harrowing and manuring. It is kept clear of weeds and in good tilth by subsequent harrowings till the time, sowing or planting operations begin.

For crops that require irrigation, the field is laid out to ensure even distribution of irrigation water. For a few irrigations in case rains are sufficient, long beds, according to the slope of land, are laid out by the use of the head piece of a harrow to raise small bunds. The dimensions of the beds are 3 to 4 feet in width and the length to suit the slope of land. For crops requiring irrigations at regular intervals throughout the season, the land is laid out into beds (12′ × 6′ or 10′ × 10′ or 12′ × 12′) for crops like cucurbits.

Irrigation :—Under our conditions rainfall being seasonal and irregularly distributed, for obtaining normal growth rain water is required to be supplemented by irrigation either from a well or a canal. Long season and perennial crops are always grown under secured irrigation either from a well or a canal. Under the well irrigations the watering turns are under control, but under the canal irrigation the watering turns are restricted to either 10 to 12 days interval. This is a great handicap in the canal irrigation. In the earlier stages a crop requires small dose of water at short intervals. In the hot season also irrigations at short intervals are essential. Irrigation intervals also depend upon the material of the soil. On light soils less water at shorter intervals is necessary while on heavier type of soils longer intervals of irrigation will suffice.

After-Tillage-operations consist of inter-cultivation and weeding, top dressing of manure, earthing up and other special operations. Intertilling operations are done by bullock hoes to keep surface soil in granulated conditions and to remove weeds. Hand weeding is given in the line of plant rows or just on sides. The operation of intercultivation is shallow and is confined to upper two to three inches and starts when plants are 4 to 6 inches in height.

Top dressing is done to supply plant food material to the growing plants at a time when they need most. The local practice is to supply oil cake manures in doses depending upon the value of the crop and the economic condition of the farmers. The Department of Agriculture is popularising the use of artificial manure like sulphate of ammonia, Superphosphate, bone meal etc. which is getting popular with the farmers and gardeners. During the war time when the prices of vegetables were high such artificial manures were used in large quantities. Oil cakes and sulphate of ammonia with bone mixture is now freely used with garden crops, doses varying from 20 to 30 lbs of Nitrogen per acre for ordinary crops to 60 to 80 lbs of nitrogen for crops like Suran and about 300 lbs of nitrogen for the sugarcane crop.

Earthing up operation consists of raising soil to the underground growing part of the plant. For example, tuber crops like potatoes, bulb crops like onions and garlic and corn crop like suran develop in the soil while developing comes near the surface and part gets exposed. To avoid this earthing up operation is resorted to by farmers. It is either done by hand labour or by an implement like a plough or a ridger. By earthing up the growing part gets protection and more room for development.

With some of the crops like sweet potatoes some special operation like turning of vines in order to break the contact of the vines with soil is necessary. If this operation is not done sweet potatoes set at every joint and the development of the main tuber is retarded. This results in small tiny sweet potatoes mostly in un-marketable condition.

In case of a crop like onions at the time of maturity necks thicken with a result that bulb development is retarded. In order to avoid this thickening necks are broken either by manual labour or by running a plank harrow over the crop. This reduces the stem growth and encourages the bulb development.

Pests and Diseases :— In the traditional farming methods control of measures are not attended to. This is left to nature either for cure or worst to happen. The Department of Agriculture has worked out cure for many ills but due to lack of organisation no speedy action is taken. Individuals organise control measures with success, but when mass action is necessary nothing tangible is done for vegetable crops.

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